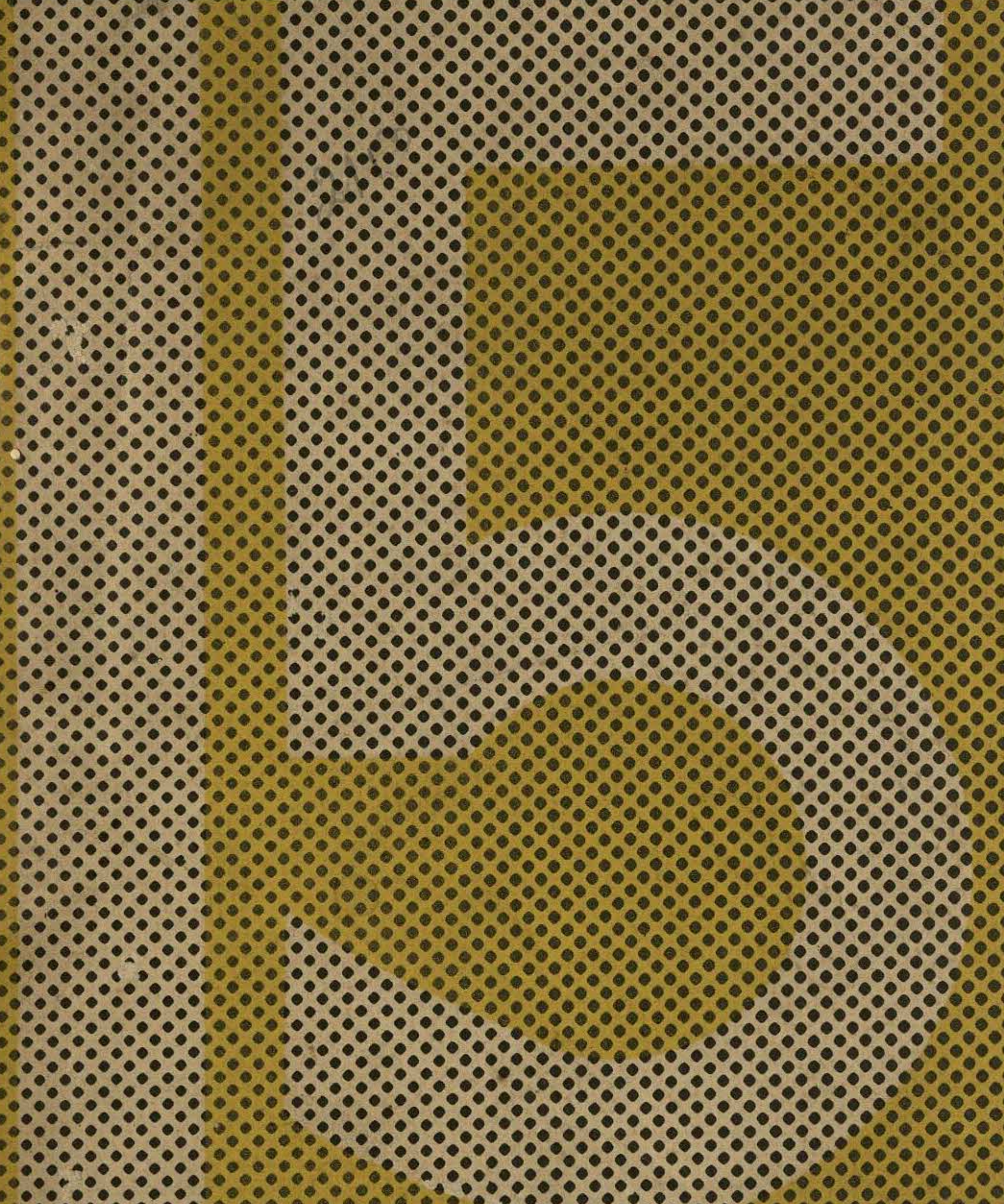
FIFTEEN YEARS OF PLANNING



Three five-year plans have been completed. Their impact on our national life has been widespread.

This pictorial publication is an attempt to present a panoramic account of the achievements of planning in India.

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FIFTEEN YEARS OF PLANNING

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A new deal for an ancient land

TWO centuries of alien rule had left India politically weak, economically backward and culturally stagnant. When the nations of Europe and America flourished in the wake of the industrial revolution followed by political democracy and cultural renaissance, India sank deeper and deeper into poverty and decay. Agriculture stagnated ; industrial advance was rudimentary ; the people had little voice in the governance of the country ; and the arts and crafts languished. The foreign power was interested largely in the exploitation of the country's vast primary resources to its advantage.

Eventually, the people of India realised that they could develop their personality only in freedom. Their struggles and sacrifices under the leadership of Mahatma Gandhi bore fruit on the 15th of August, 1947.

But Independence saw the country partitioned, with vast masses of people—nine million of them—uprooted from their homes. Within India, the colonial power had left some five hundred and sixty princely states. Though India had become free, she had yet to evolve a system of political democracy which would guarantee and safeguard justice, equality and people's sovereignty. Above all, there remained the challenge of two centuries of neglect, the challenge of abysmal poverty.

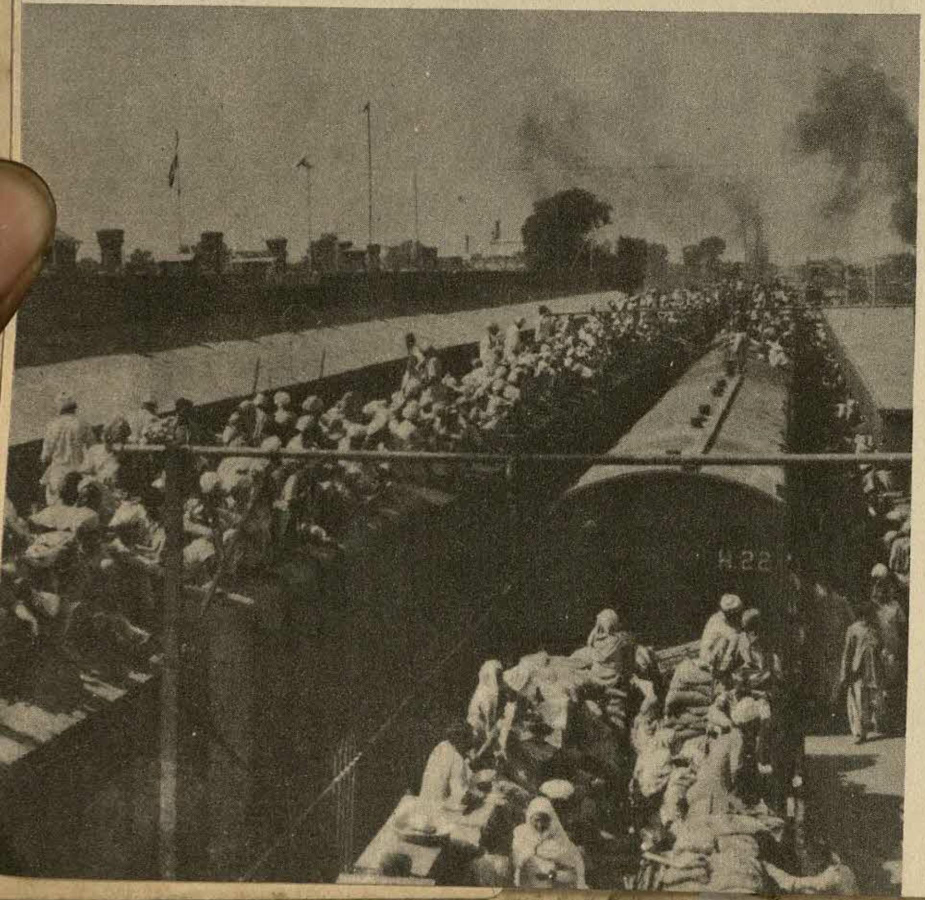
It was to these tasks, then, that the people of India had to bend their energies. The challenge was tremen-

August 15, 1947

dous, for India is a vast land with many faiths and languages, a huge population that is rapidly increasing and an overburden of traditions and beliefs not all of which are helpful in wiping out the backlog of centuries.

Fortunately, we had in Jawaharlal Nehru a leader of outstanding vision with overwhelming popular backing.

The great influx



Integration of States

In the early years of our Independence, we had in Sardar Vallabhbhai Patel a leader of unshakable purpose and indomitable will.

First things had to be done first and done fast. Millions of people who poured into our country from Pakistan were found homes and employment. The 560 pieces in which the British had left the country were welded into a single political entity. A Constitution was drawn up and on the 26th of January, 1950, India became a Sovereign Democratic Republic. The people became masters of their destiny. All this was accomplished in barely two and a half years of Independence—an unmatched record of peaceful, non-violent and democratic achievement.

The Constitution paved the way for economic development. With political and administrative stability achieved and the problems of rehabilitation largely solved, the groundwork had been done for action on the economic front. Ahead lay the gigantic, uphill task of ending want and disease, of building the people's wellbeing and happiness.

Though India's earth and rivers and mountains were known to contain immense wealth and her human resources were equally great, she had very little of modern know-how and equipment. Vast sections of the people did not even go to school. Farming methods were old-fashioned and unremunerative ; agriculture largely was dependent on the rains. Communications were inadequate, and our people were plagued by many diseases which reduced their health.

Harnessing the country's resources in men and material was a task of great magnitude, calling for sustained hard work and sacrifice. Along with this another and equally important and arduous responsibility was cast on us. That was to build our defences and defensive strength.

This was a challenge to the people's faith and patriotism—a challenge which they cheerfully accepted. In fifteen years of planning much has been accomplished, although a lot more remains to be done.

A Republic is born

The five-year plans are at once a solution to the country's problems and the instrument of national purpose and national unity. In the common task of building the people's welfare have been drowned differences of region, language and caste. Our big projects have attracted engineers, technologists and administrators from all parts of the country. The plans are a great catalyst of unity.

Much of the new India that we see around us today was only a vague idea or a blueprint on a drawing board fifteen years ago. Today in every part of the country many of these ideas have blossomed into a new deal for the poor and under-privileged. Many of the blueprints have come alive in brick, mortar and cement.

The face of India is changing. All around us we see evidence of this changing India.

To capture in a few photographs the face of new India in full measure is an impossible task. The following pages offer only glimpses of the big changes that fifteen years of planning have brought about.

A SAGA OF EFFORT AND ACHIEVEMENT

- Despite the large increase in population, the average food and cloth availability has gone up in fifteen years of planning. Per capita output of food rose from 12.8 to 15.4 ounces and of cloth from 11 metres to 15 metres.
- Expectation of life at birth has risen from 32 to 50.
- The national income has more than doubled and income per head has increased from Rs. 266.5 to Rs.421.5 at current prices.
- In 1950-51 we were almost wholly dependent on imports for kerosene and other petroleum products. Now we produce almost our entire requirements in petroleum products, except kerosene. In this too, we produce two-thirds of our needs.
- We have almost eliminated imports of drugs, pharmaceuticals, paper and paper board and sugar machinery.

Era of Planning

- In fertilisers, dye-stuffs, caustic soda, soda ash, plastics, synthetic fibre yarn, aluminium, textile machinery, mining equipment, etc., our dependence on imports is fast disappearing and will cease in five years.
- We are now exporting machinery and engineering goods not only to other countries in Asia and Africa but to highly developed nations of Europe and America.
- With the striking successes in exploration, India has been put on the oil map of the world.
- Huge river valley projects and giant power schemes have brought new life to our countryside.
- Mass education on an unparalleled scale is wiping out illiteracy and superstition.
- More hospitals and public health centres, better drinking water and sanitation facilities, the war on diseases—all this is improving the nation's health.
- While India keeps pace with the nuclear age, she also cherishes her traditions in art, music and human inventiveness.
- As India rediscovers her ancient genius and keeps step with modern science and technology, a new social revolution is being ushered in.
- And all this happens in a climate of consent and democracy.

Transformation in the countryside

INDIA lives in her villages, it has been said. The degradation of India under foreign rule was most powerfully illustrated in her villages. Crushed by the zamindars and the money-lenders, ignorant of new techniques of farming and clinging to fragmented strips of land, India's peasants, half-clad and ill-fed, lived in poverty and disease. The land on which they lived yielded less and less with each passing year. The villages bore all the marks of this deepening poverty — bad housing, inadequate communications, pervading illiteracy, malnutrition and disease.

And consider what freedom and planning have done to India's sprawling countryside. The zamindars have gone. The peasants have come into their own. Electric power has illumined the lives of the rural people. Electrically operated irrigation pumps are a familiar sight in the villages. Besides better seeds and fertilisers, water for the fields flows from reservoirs, big and small. Tractors have made their appearance in many rural areas. Virgin land is being brought under the plough, thus adding to the wealth of the rural people. A war has been launched on pests and insects.

New roads run through the country, bringing goods and services from far and near and opening up a larger market for what the villages produce. Drinking water facilities are being expanded. Schools, dispensaries and health centres have sprung up in most villages. The village arts and crafts and industries have revived with the breath of freedom.

Several schemes for cattle and fishery development and dairying have been taken up.

The cooperative idea and the panchayat system have brought a new sense of strength and pride to the villages.

Fifteen years ago, when the first blueprint of our national development was released, there was general recognition that the progress of India presupposed the prosperity of the villages in which live four out of every five Indians. The emphasis on agriculture in the First Plan was enlarged in the subsequent plans and the idea of integrated development of the villages emerged. This found expression in the community development programme.

There is new life in our villages, new hope and pride. A new society is emerging from the debris of the past. New and dignified social relationships have been developed. Machines have appeared almost at the villagers' doorsteps. The radio has reached even the remotest hamlet.

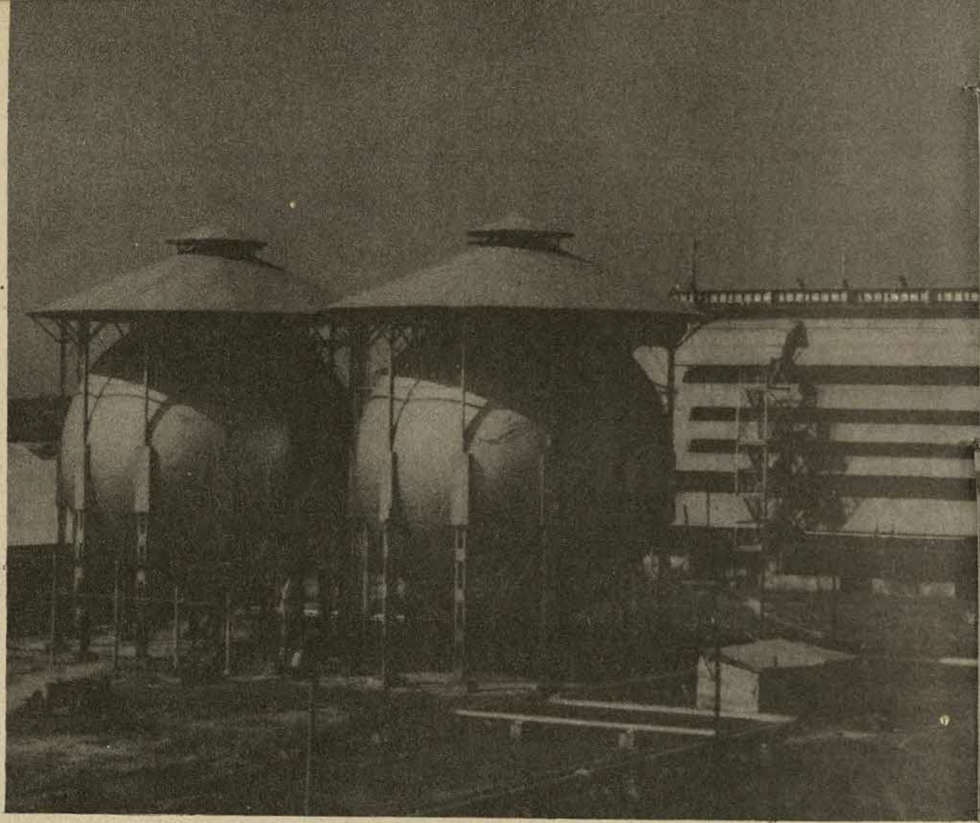
In the vast change in the rural scene lies the key to the revolution that freedom and planning have started in this ancient land.

SOME FACTS

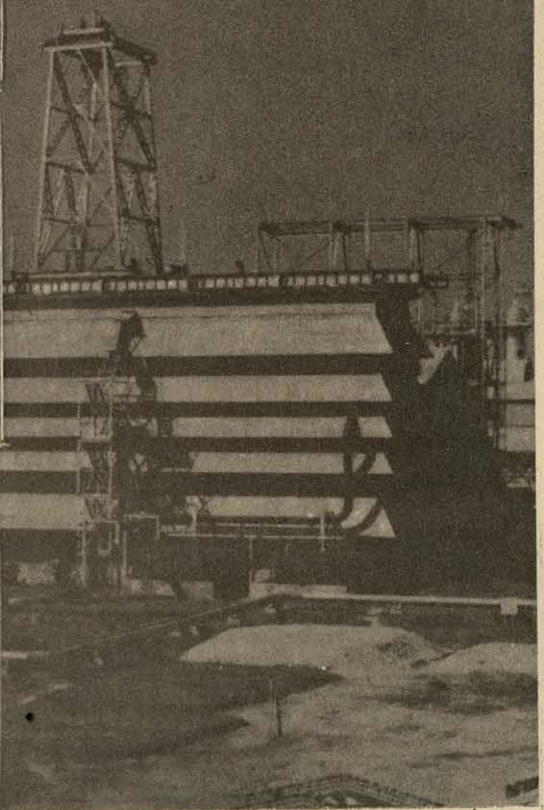
- In fifteen years of planning output from agriculture and allied occupations has gone up by fifty per cent. At constant prices, in money terms, the increase was from Rs. 43,400 million in 1950-51 to Rs. 65,000 million in 1964-65.
- Food production in the same period increased from 54.9 million tonnes to 89 million tonnes.
- Despite the fact that there are now more people to feed, food output per head of population has gone up from 12.8 to 15.4 ounces a day.
- Production of sugarcane has increased by 5.4 million tons, of oilseeds by 3.2 million tons, of cotton by 2.8 million bales, of jute by 2.5 million bales and of milk by 7.6 million tons.
- The input of fertilisers has increased elevenfold and the number of tubewells over ninefold.
- The area covered by improved seeds has gone up to 120 million acres.
- Cooperative credit available has swelled to Rs. 4,000 million from under Rs. 230 million.

Into the earth did we sow the first seeds of planning. From this earth we now reap a richer harvest. Yielding to the sweat and toil of our farmers and the modern methods of farming, India's soil gives two-thirds more of food and other crops than it did fifteen years ago. Breaking new ground with tractors and bringing life-giving waters from dams and wells along miles and miles of channels, we have made even the desert bloom. The 30,000-acre Suratgarh farm in Rajasthan stands as a testimony to the success of our efforts to get more from the land.

Striking results have been achieved by the farmers by using improved seeds. Research in our agricultural institutes is constantly throwing up new high-yielding varieties. Seed multiplication farms have been set up to make improved seeds available to the farmer.



In the intensive programme of farm production, larger supplies of fertilisers play a vital role. Sindri was a pioneer in large-scale production of fertilisers in our country.



Benefiting from the experience of other countries, we have introduced new patterns of sowing and harvesting. Among them is the Japanese method of paddy cultivation.

In 1966-67, over 60 million acres are to benefit from plant protection measures which include seed treatment, control of field rats and insects and control of diseases affecting annual and perennial crops. Production of plant protection equipment in the public sector is being expanded.

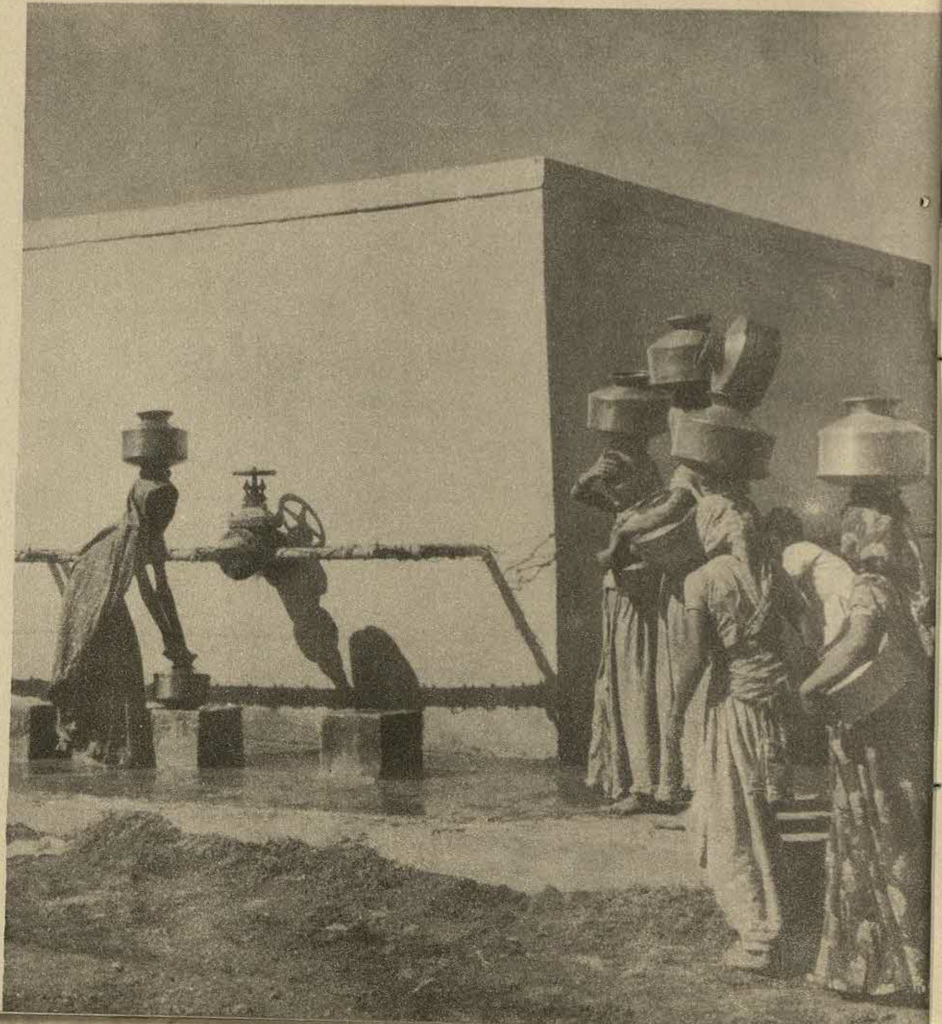
A large programme for improvement of cattle is under way. Scrub bulls are being castrated and a nation-wide network of artificial insemination centres has been opened. About 92 per cent of the inoculable bovine population has been vaccinated against rinderpest.

Programmes for the development of marine fisheries include the use of mechanised boats and improved fishing nets and gears, and provision of landing and berthing facilities for fishing vessels in ports.

Production of milk has increased from 17 million tons in 1950-51 to about 25 million tons.

Block Development Officers play a crucial part in carrying the benefits of know-how to the village. Each block has 20 trained men.

More and more villages and small towns are benefiting from schemes of protected water supply. Vastly improved sanitation is also contributing to better public health. Investment in such schemes is increasing rapidly.



A cooperative is one of the three basic village institutions, the other two being the school and the panchayat. An integrated programme of cooperative development has been implemented under the Five Year Plans.

Only 4,000 villages and towns had electricity in 1947. Now, as many as 55,000 villages and towns have been electrified. Madras State has the distinction of providing electricity to practically each of its 14,000 villages.

Community Development has stimulated an integrated approach to rural development. This is based on local initiative and community action. Work is often done through representative institutions of the people.

With the emergence of panchayats wide administrative, judicial and development powers have been delegated to them. There are more than 200,000 village panchayats, covering almost 97 per cent of the entire rural population.

Rivers in the service of farm and factory

FROM days beyond history, India's rivers have been venerated in song and story. In our time, poet Bharathi dreamt of the day when the surplus waters of one state would bring life to parched lands elsewhere. Today the waters of Himachal irrigate the deserts of Rajasthan. Soon, we may hope, the anxious scanning of the skies for sustenance of our crops will be a memory of the past.

India's rivers of plenty have also been known for their fury and waywardness. For ages, we have been as helpless before the onrush of floods as we have been in the face of famine.

This helplessness is now giving place to a mood of hope.

Nothing illustrates the churning of India's ancient energies better than the harnessing of her rivers for modern development. Damodar, Bhakra-Nangal, Hirakud, Tungabhadra, Kakrapar, Mayurakshi, Chambal, Kosi, Nagarjunasagar, Rihand, Koyna, Sharavathi, Gandak, Narmada—all this and much else have not only changed India's landscape but have brought a sense of assurance to the countryside.

Each of these projects is a giant, and many serve more purposes than one—irrigation, power, flood control and navigation. A lot of money and effort and skill have gone into their execution. In fifteen years have been packed achievements which elsewhere had been spread over decades.

Caught by dams rising to great heights, many of India's rivers, hitherto prone to causing flood and havoc, now rest in the lap of the hills till they flow into myriad channels to shower plenty on a smiling land.

Descending from the hills, they release energies of great magnitude which are transformed into electricity.

This electric power is of the essence in modern economic progress. It turns the wheels of industry, lifts water from the bowels of the earth to irrigate the fields and does a thousand other things, many of which have now become familiar to people in our villages.

Not from waters alone but from coal and other sources power is produced in India on a vast scale, stored in power houses and transmitted to the far ends of the country. And, keeping pace with the nuclear age, we have launched projects like the one at Tarapur to produce atomic power.

Facts and figures tell their story. Spectacular has been our progress in the last fifteen years in the generation of power and its distribution.

Massive dams and power houses symbolise free India's adventure of modern development. "These are the new temples of India where I worship", Jawaharlal Nehru once said. "These are the places of national pilgrimage." These, too, are a monument to his vision, the harbingers of our prosperity.

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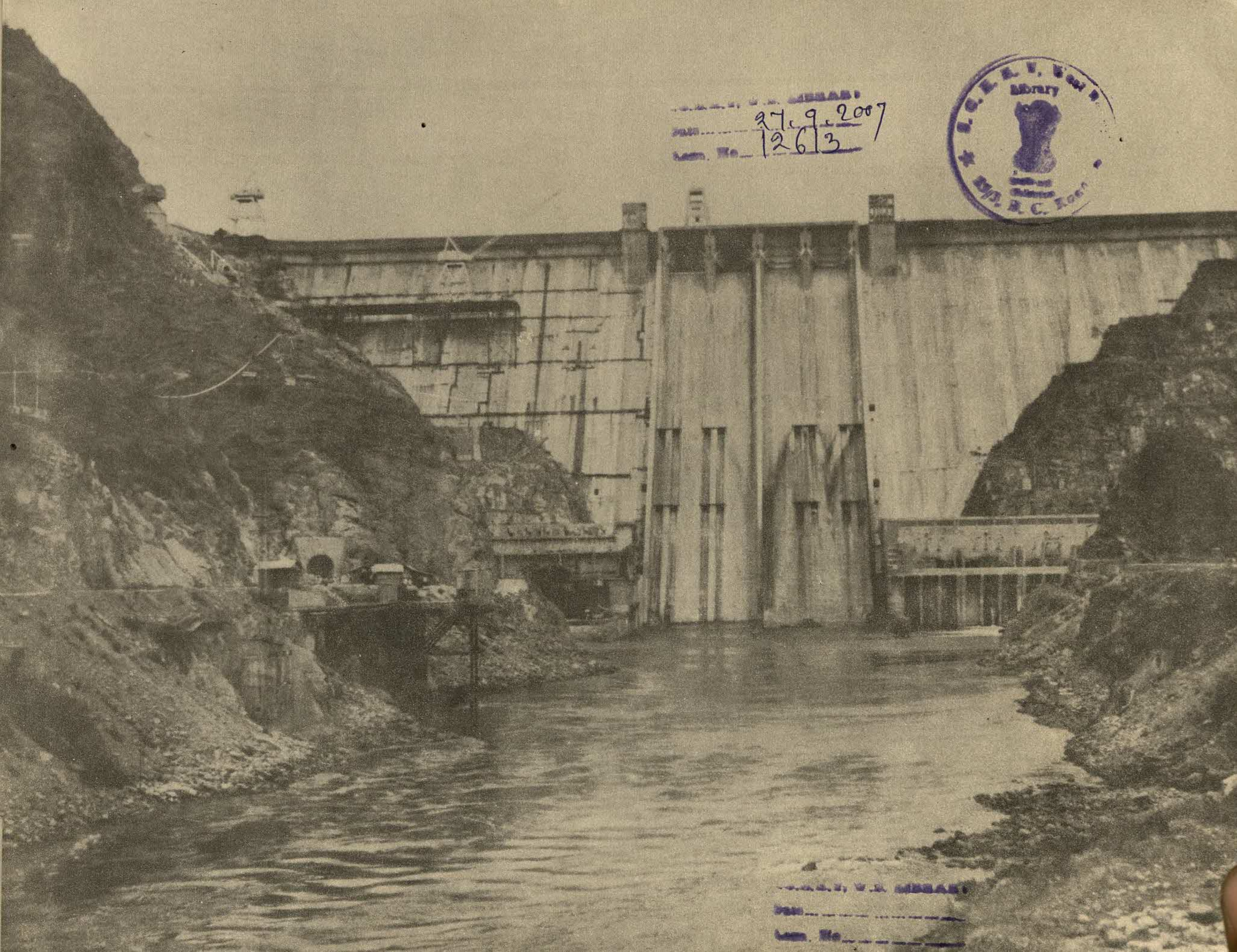
SOME FACTS

- In fifteen years of planning, the total irrigated area increased by 45.4 million acres.
- The number of irrigation tubewells went up from 3,500 to 32,400, nearly a tenfold increase.
- The utilisation of the usable water resources in the country increased from 17 to 33 per cent.
- The benefits of flood control were brought to 11.5 million acres.
- Soil conservation programmes in 13 river valley catchments covered eight hundred and fifty thousand acres.
- The installed power generating capacity grew from 2.3 million kilowatts to 10.2 million kilowatts.
- In a single year we now add to our power capacity almost as much as the total production at the beginning of the First Plan.
- As much new capacity is now installed every year as was installed in fifty years before Independence.
- In several States a single project, Neyveli in Madras for instance, produces as much power as was produced in the entire State before.
- The demand for power is steadily going up, signifying rapid growth in industry, in the use of power for agriculture and in the expansion of rural electrification.
- The number of irrigation pumping sets electrified has gone up to four hundred and eighty thousand. The increase in the Third Plan alone was three hundred and twenty thousand.
- A big advance has been made towards self-sufficiency in heavy electrical equipment.
- As many as 63 major irrigation projects and 82 power schemes of more than fifty thousand kilowatt capacity have been taken up.

●

Awe-inspiring Bhakra Dam, the kingpin of India's biggest multi-purpose project, rises against the backdrop of the Himalayas. About 225 metres in height and among the world's greatest engineering achievements, it feeds the biggest power houses in Asia. One of the world's highest dams, it has a large network of lined canals. Together with the right bank power house, the Bhakra-Nangal project has an installed capacity of over 1,200 megawatts. The dam will eventually benefit seven million acres.



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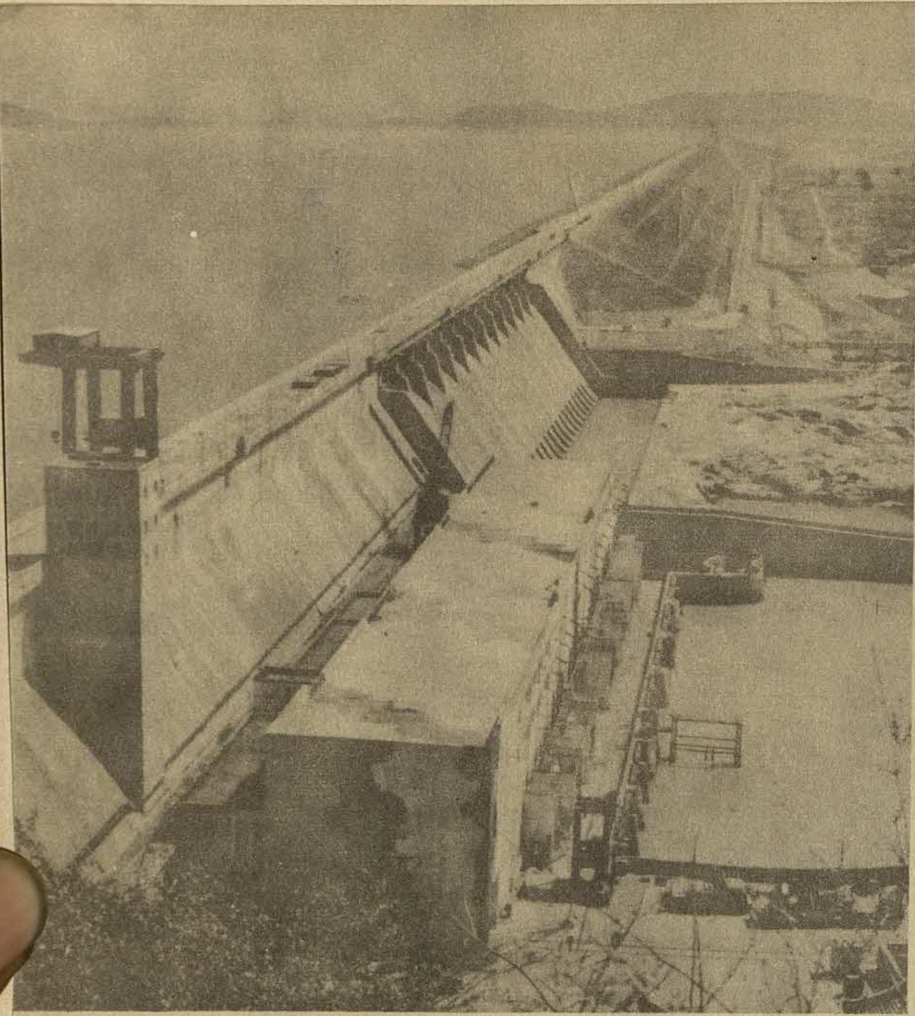
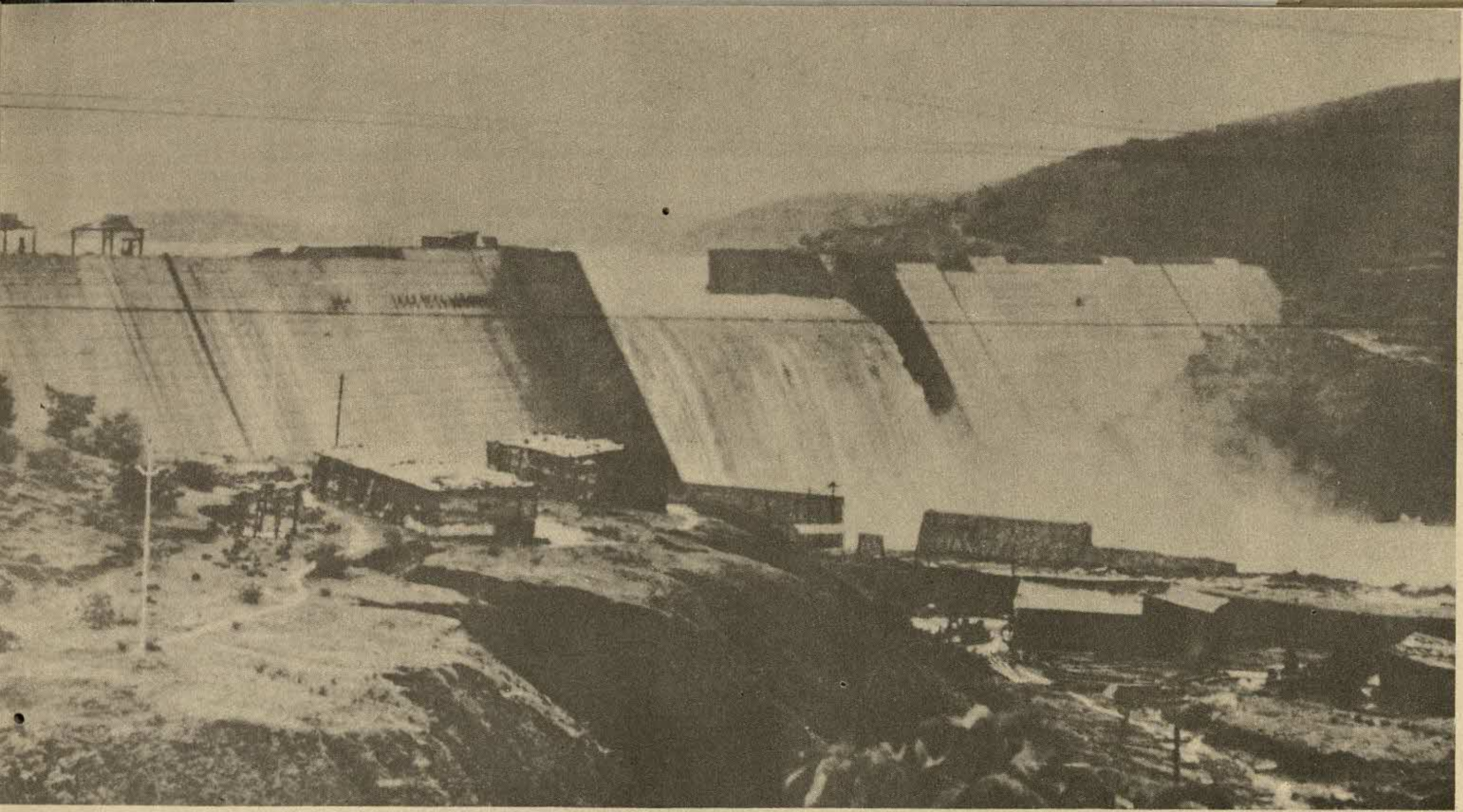


Mahanadi, once Orissa's river of sorrow, has been harnessed by the Hirakud project—the dream of a century come true for the people of the State. Impounding 6.6 million acre-feet of Mahanadi's waters and flanked by 20 kilometres of dykes, the dam, nearly 4,873 metres in length, is the world's longest. The project which generates 270 megawatts of power and irrigates six hundred thousand acres has revitalised the economy of the people of Orissa. It was executed entirely by Indian skill.

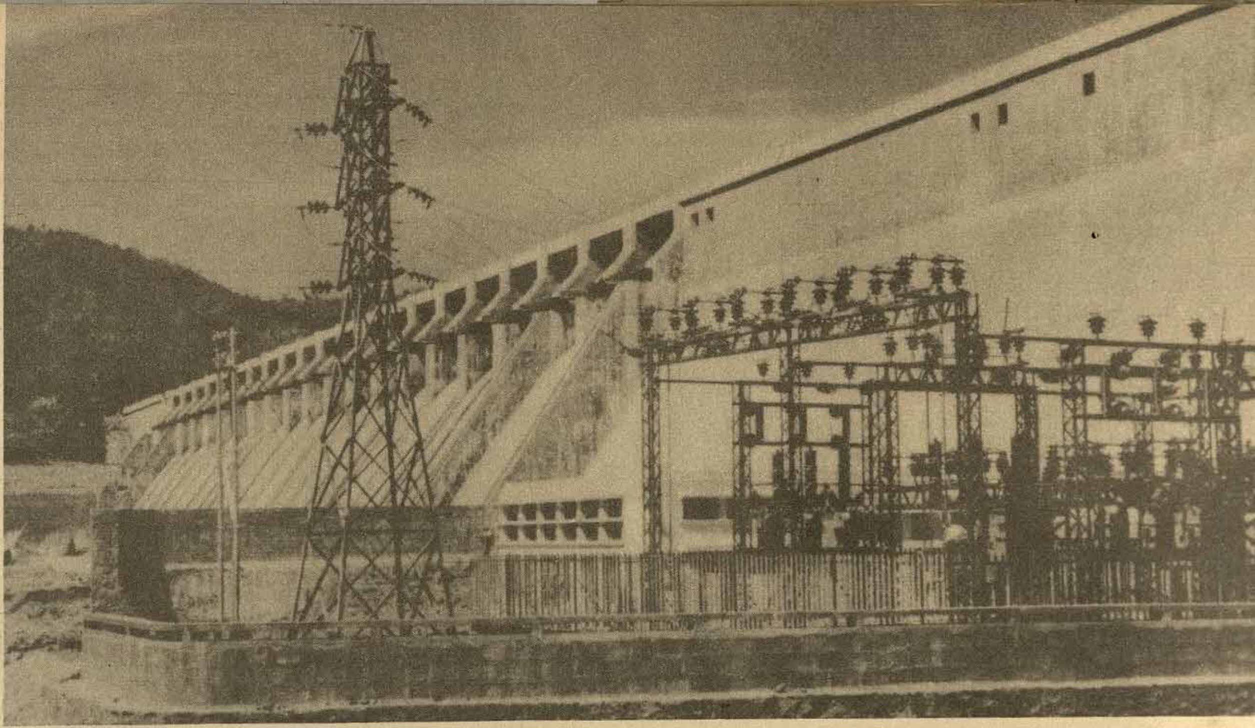
Damodar, the capricious river in India's east, is being harnessed in a number of ways. Among the features of the project are three thermal power stations with a total capacity of 625 megawatts. Of these three, the Bokaro Station by the side of the Konar river, was built in three years—a record of speed and efficiency. Its installed capacity is 255 megawatts.



Rising in the western slopes of the Mahabaleshwar plateau, the river Koyna makes a sheer drop of 610 metres on the western ghats between the ridge and the foot of the hills. This is taken advantage of in the Koyna project designed for an installed capacity of 860 megawatts of electricity.

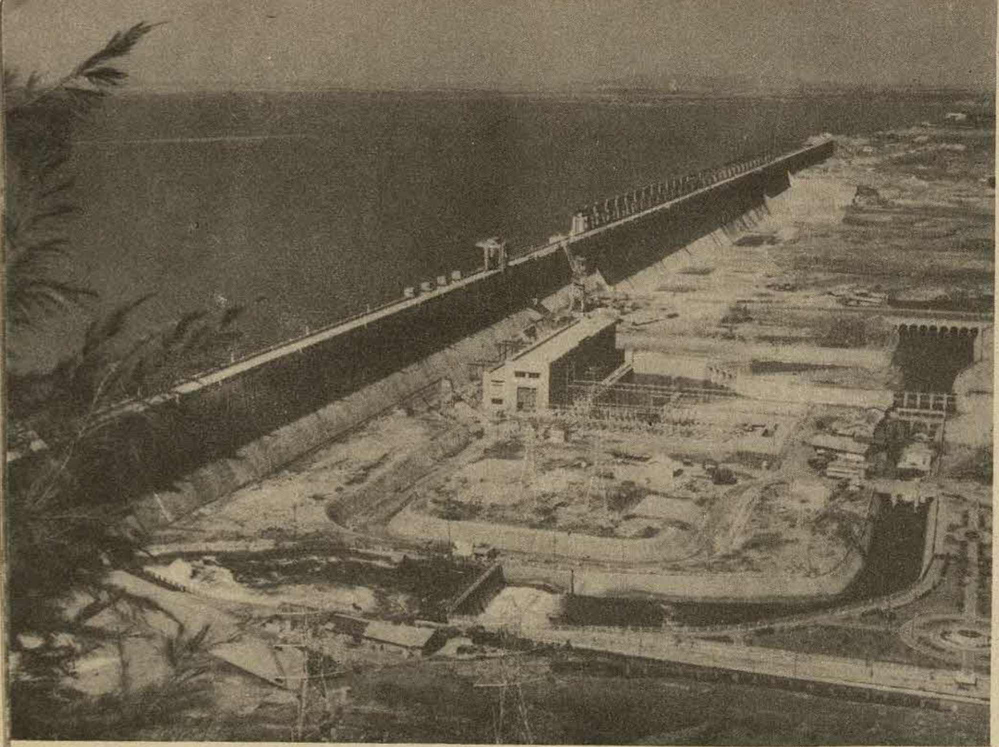
Rajasthan Canal, which promises to change the face of a vast desert, is being built at a cost of Rs. 1,840 million. It will ultimately irrigate almost 3 million acres in the deserts of Ganganagar, Bikaner and Jaisalmer.

The Nagarjunasagar Project comprises a masonry dam on the Krishna river and two canals, one on each side of the river and measuring 216 kilometres and 172 kilometres in length respectively. The canals will together irrigate an area of over two million acres. The dam will be provided with eight penstocks of 4.2-metre diameter for the generation of power in the final stage of the project.



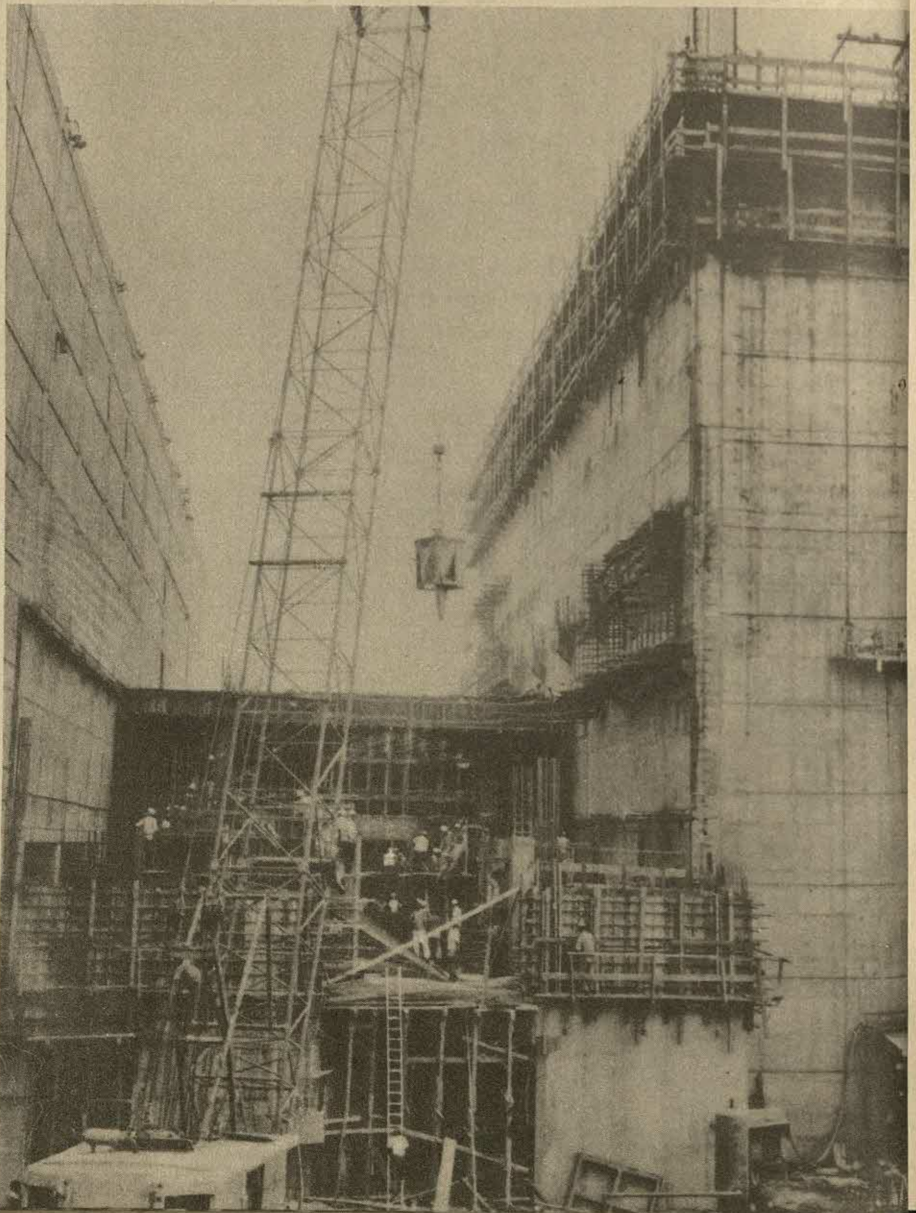
The Chambal river rises in the northern slopes of the Vindhyas. The multi-purpose project which harnesses its waters is a joint venture of Madhya Pradesh and Rajasthan. The project will generate 387 megawatts of power besides irrigating over 1.4 million acres.

The Mayurakshi is a hill stream rising in the uplands of the Santhal Parganas district of Bihar. After entering West Bengal, it joins the Bhagirathi. Its waters are being harnessed mainly for irrigation. The dam is 47 metres high and 660 metres long. The canals will irrigate six hundred thousand acres.



The stone masonry dam across the Tungabhadra is one of the longest of its kind in the world. A joint undertaking of Andhra Pradesh and Mysore, the Tungabhadra project comprises a 1,741-metre long dam, a 204-kilometre long left bank canal with a power house, a 349-kilometre long low level canal with two power houses and a 196-kilometre long high-level canal on the right side. Though primarily intended for irrigation, the project has a power-generating capacity of 99 megawatts.

The Tarapur station, pioneer in nuclear power generation in India, will have two reactors, each producing 190 megawatts of power. With the nuclear stations which will come up near Rana Pratap Sagar and at Kalpakkam, Tarapur will make a big contribution to India's power capacity.



Onward with machines

INDIA, with all the grandeur of her past and the diverse wealth of her natural resources, emerged into freedom in a state of poverty because she was by-passed by that significant phase of human history—the industrial revolution. When, with her ancient genius and skills in the sciences and the arts, she might have been among the first to profit by the new inventions of human ingenuity, she languished in bondage and sank deeper and deeper into backwardness.

Two centuries of unbroken progress in science and technology had given the nations of the West ample time to develop in leisure and modernise their economy continuously. India, on the other hand, not only had to race against time to catch up with the ever-advancing frontier of modern technology but had to depend heavily on foreign know-how and capital.

At the time of Independence almost everything we used in industrial goods, we were importing. We could have continued doing so only by selling our primary products. This would have become increasingly difficult because of the growing demand at home for some of these products. Besides, this would have condemned us to permanent backwardness.

We had quickly to become self-reliant not only in the goods that we needed, but also in the machines and know-how which could produce them.

The task before the planners was to meet the needs of industrial development along with the other competing demands. Above everything, it was recognised that industrialisation should first serve the needs of our agriculture and help exploit our natural resources.

What we see today is the result of much far-sighted planning. The rapid expansion of our power capacity, the increases in coal raisings, the finding of new sources of oil and the creation of refinery capacity, the exploitation of our iron ore deposits and the building of the steel plants, to name only a few of our projects, have the objectives of helping agriculture, making the most of our natural resources and reducing dependence on others.

Proceeding in accordance with a wise order of priorities, we began building ships and aircraft, making locomotives—steam, electric and diesel—, turning out wagons, building automobiles, scooters and the like. We also embarked on making machines that make machines and making the tools for the machines. We turn out a wide range of equipment for our factories, including machinery for our power projects.

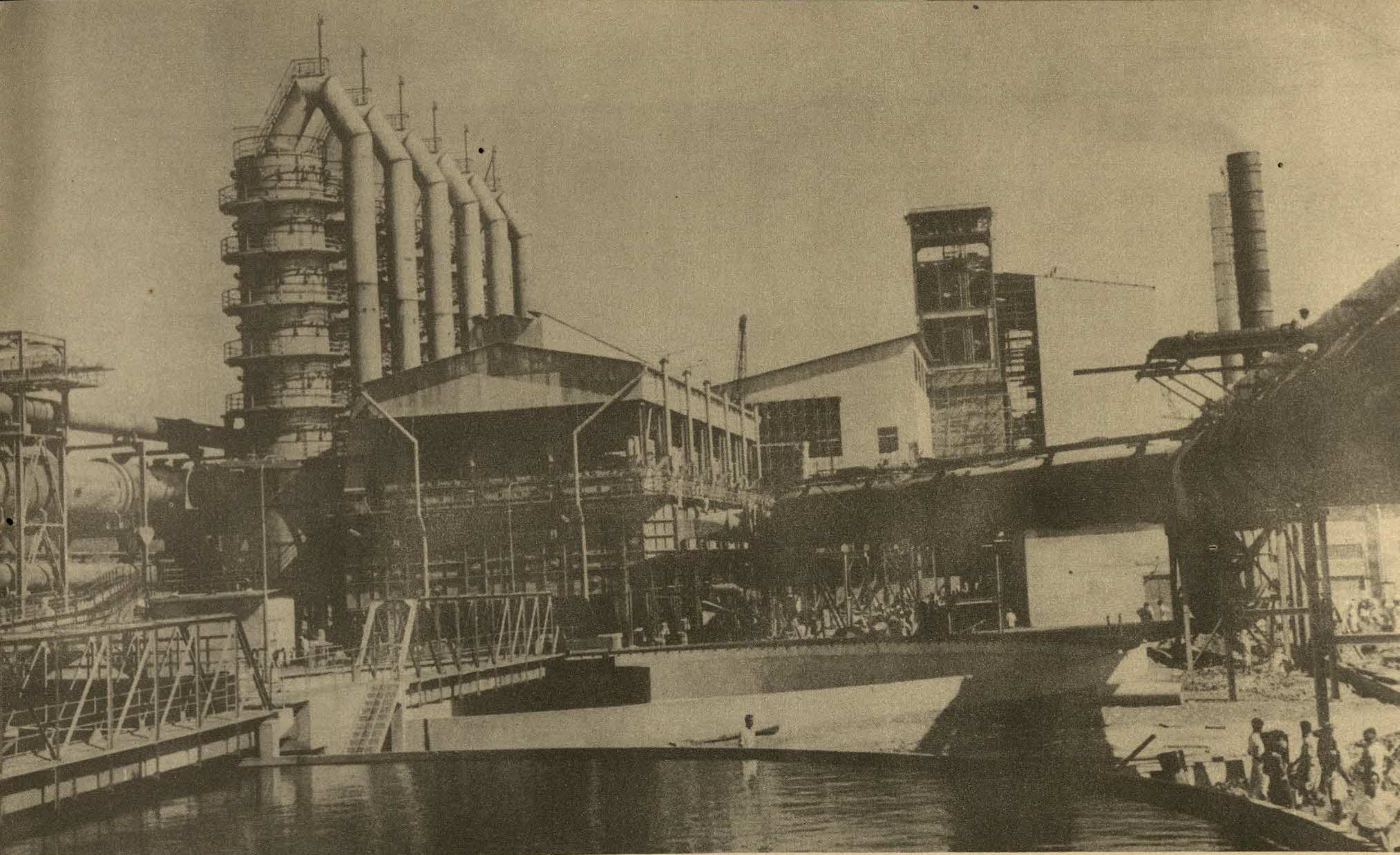
Slowly our dependence on others is disappearing in an amazing number of items. We now produce a variety of engineering and precision goods.

All this has diversified our economy. Our country is no longer a mere market for European industry. In fact, we export a number of manufactured goods to the West.

The massive industrialisation of India is releasing new energies and enthusiasms among our young people and is itself the instrument of a social revolution.

SOME FACTS

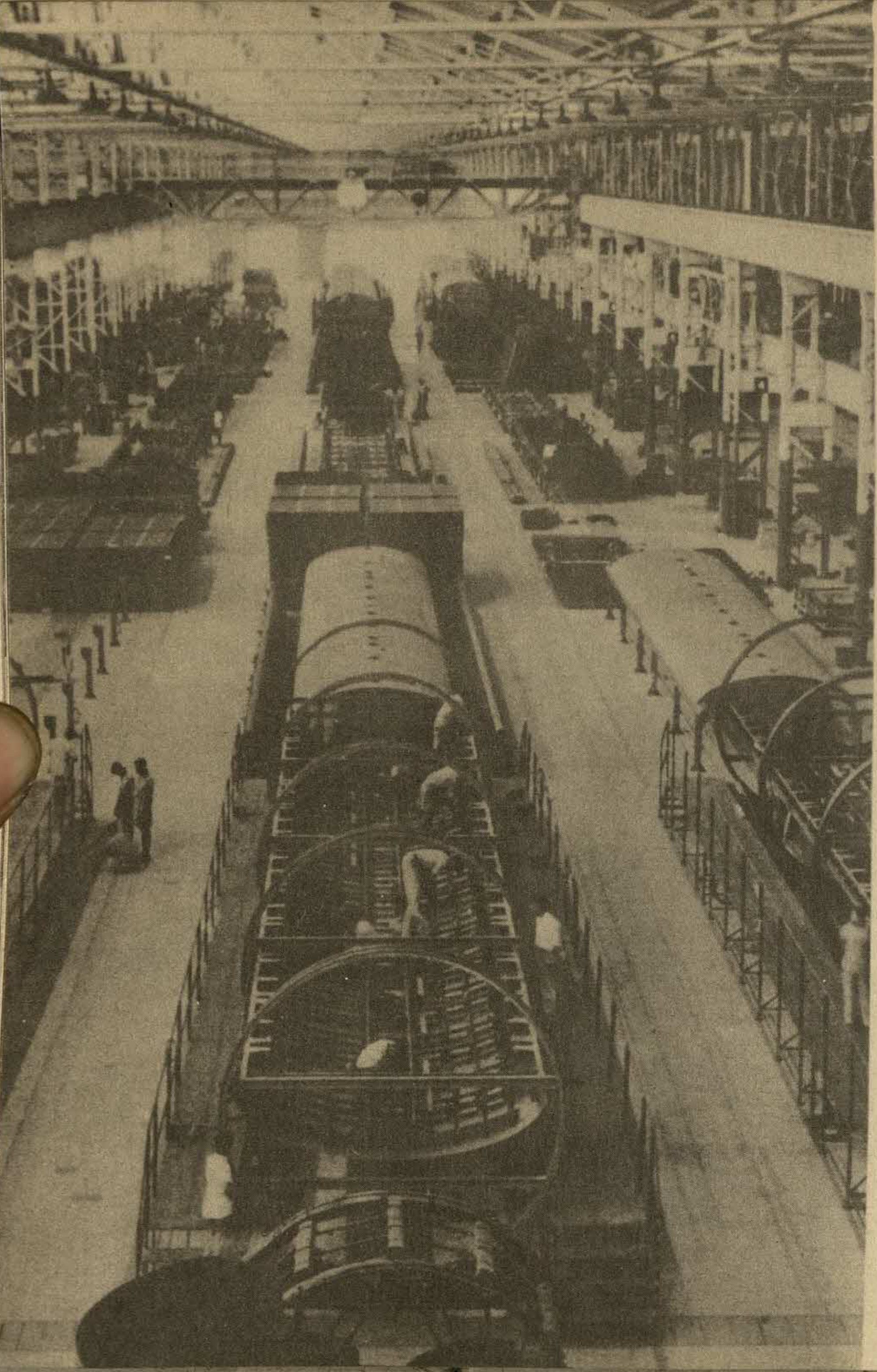
- In the three Plans nearly Rs. 47,000 million has been invested in industry.
- In fifteen years of planning the net national output from industry has gone up by 73 per cent.
- Finished steel output went up from 1.04 million tonnes to 4.6 million tonnes.
- Production of aluminium ingots rose from 4,000 tonnes to 65,000 tonnes, a sixteenfold increase.
- Output of diesel engines also rose sixteenfold.
- Production of automobiles increased from 16,500 to 68,500.
- In machine tools, the value of output swelled from Rs. 3 million to Rs. 230 million.
- There has been a seventeenfold rise in the output of bicycles.
- Cement output rose fourfold.
- Production of nitrogenous fertilisers went up from 9,000 tonnes to 233,000 tonnes.
- Coal raisings were more than doubled and iron ore production went up seven times.
- There has been a sevenfold increase in the value of cotton textile machinery produced in India.
- There has been a fiftyfold increase in the production of petroleum products.
- We now export machine tools to the United States, West Germany and Czechoslovakia; railway equipment to Britain and United States; refrigerators to Hungary; heavy water to Belgium; telephone equipment to the Soviet Union; surgical goods to Canada; textile machinery to Britain and West Germany.
- Mill-made cloth output has gone up from 3,400 million metres to 4,400 million metres.
- In other consumer goods, output of sugar has gone up threefold, electric fans sevenfold, razor blades ninetyfold, sewing machines tenfold and radio receivers also tenfold.
- We now produce Rs. 1,500 million worth of drugs and pharmaceuticals, 550,000 tonnes of paper and paper board, 30,000 tonnes of newsprint and 450,000 watches and time-pieces.



Set amidst the hills of Chota Nagpur, the Rourkela Steel Plant, built with West German help, specialises in the production of flat steel products. The output is being expanded from one million tonnes to 1.8 million tonnes of ingots.

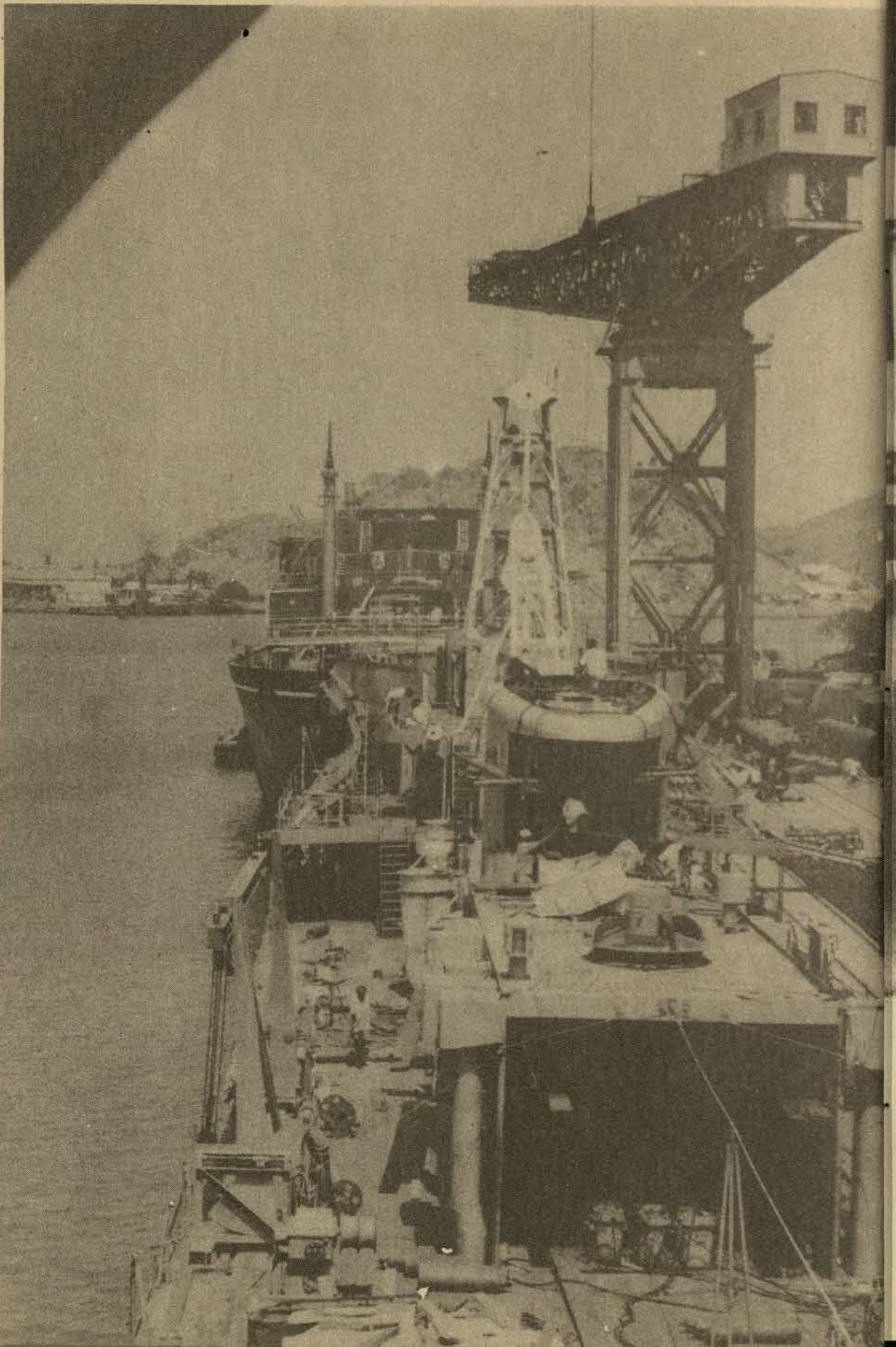
Eleven years ago was signed an agreement between India and the Soviet Union and Bhilai, a village in the heart of Madhya Pradesh, unknown to fame or fortune, assumed importance. In these eleven years, the progress of Bhilai has been a symbol of India's growing industry. The plant produces rails, heavy structurals, etc. Its capacity is being expanded from one million tonnes to 2.5 million tonnes.

India is now self-sufficient in steam locomotives. This achievement, in fifteen years, is a tribute to the energy and patriotism of the workers of the Chittaranjan factory. The factory also turns out electric locomotives. India is self-sufficient in wagons and coaches too.



Integral Coach Factory, Perambur

Visakhapatnam Shipyard



The Hindustan Aeronautics, Limited, has developed a modern, all-metal basic trainer aircraft, the now well-known HT-2, Vampire fighters, Gnat fighters and aero-engines. It is also producing an ultra-light multi-purpose aircraft named "Pushpak", a light 4-seater aircraft "Krishak" and the supersonic jet fighter-interceptor HF-24.

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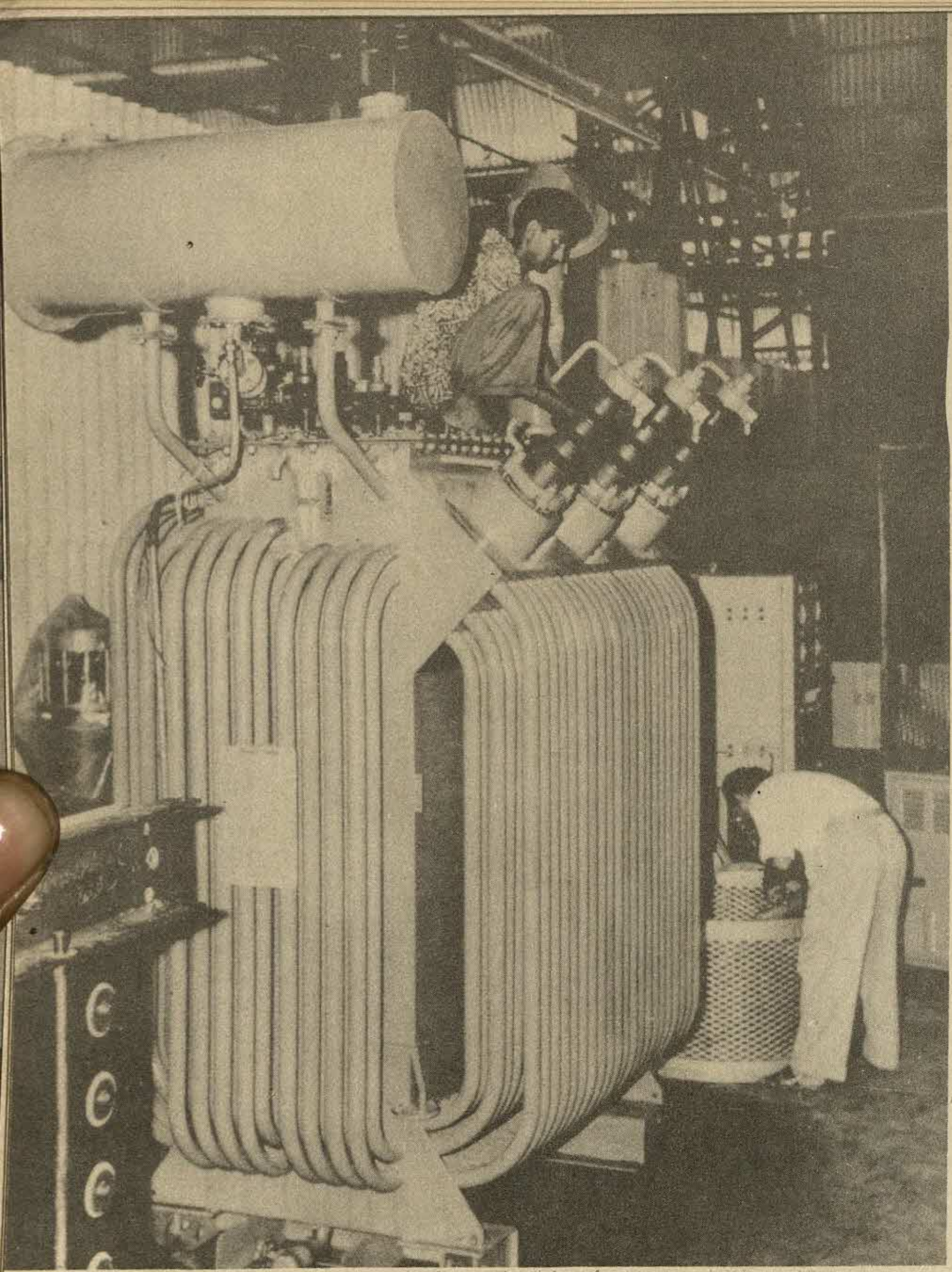

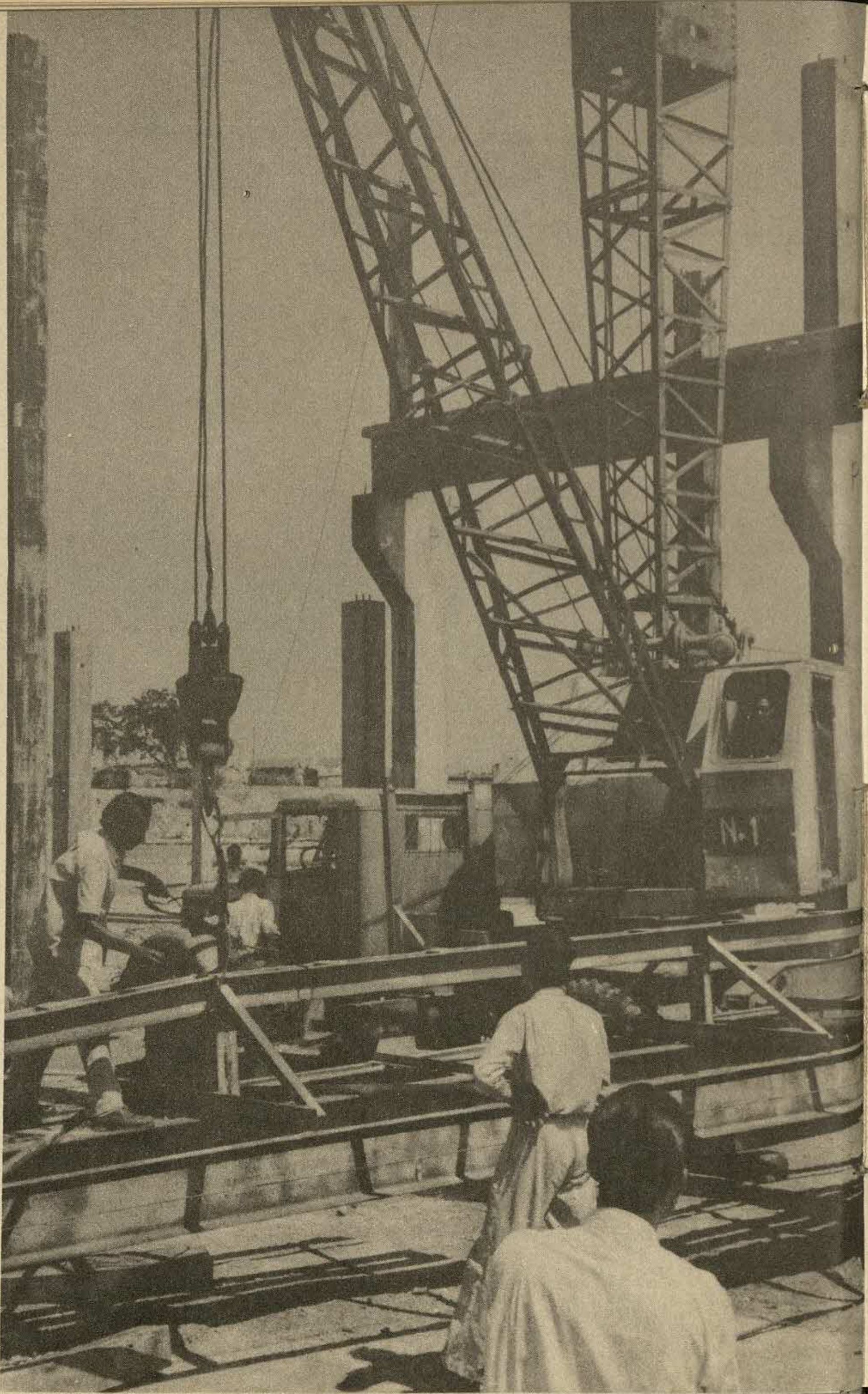
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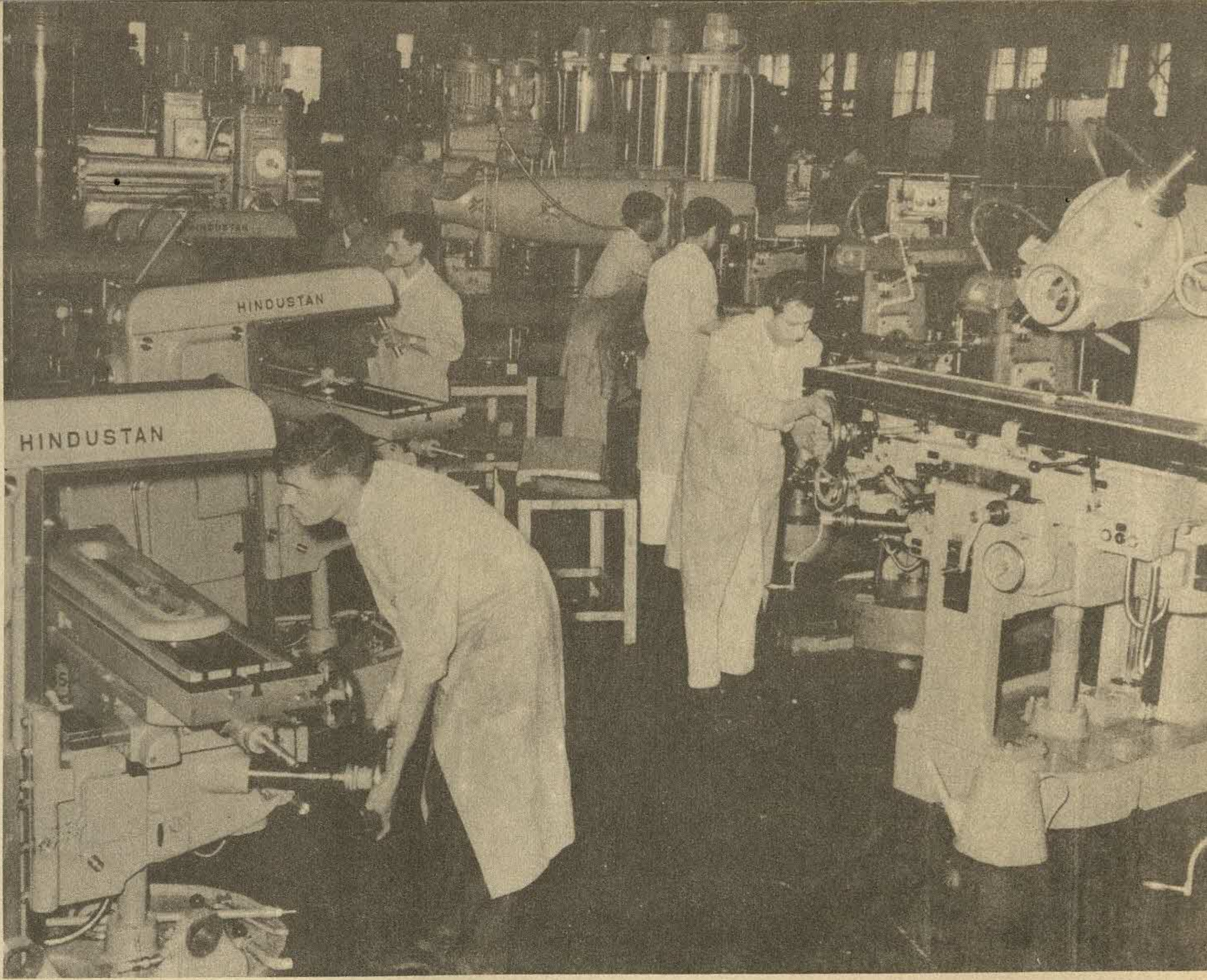
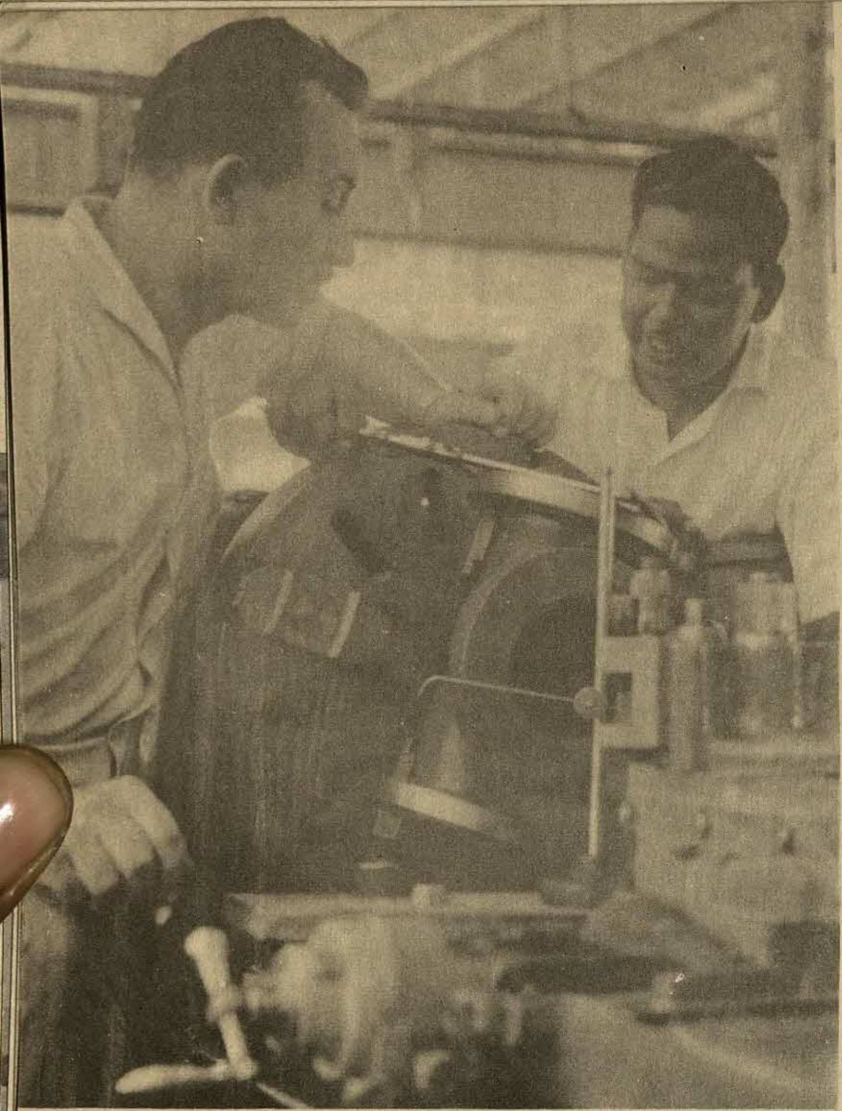
The heavy electrical equipment factory at Bhopal manufactures hydraulic turbines, control gear, switch gear, generators, transformers, etc. Two other heavy electrical plants are being set up, one at Hardwar and the other at Hyderabad.

The heavy engineering project at Ranchi will take India considerably towards the take-off stage in industry. This project will have the capacity to turn out equipment for one steel plant every year.



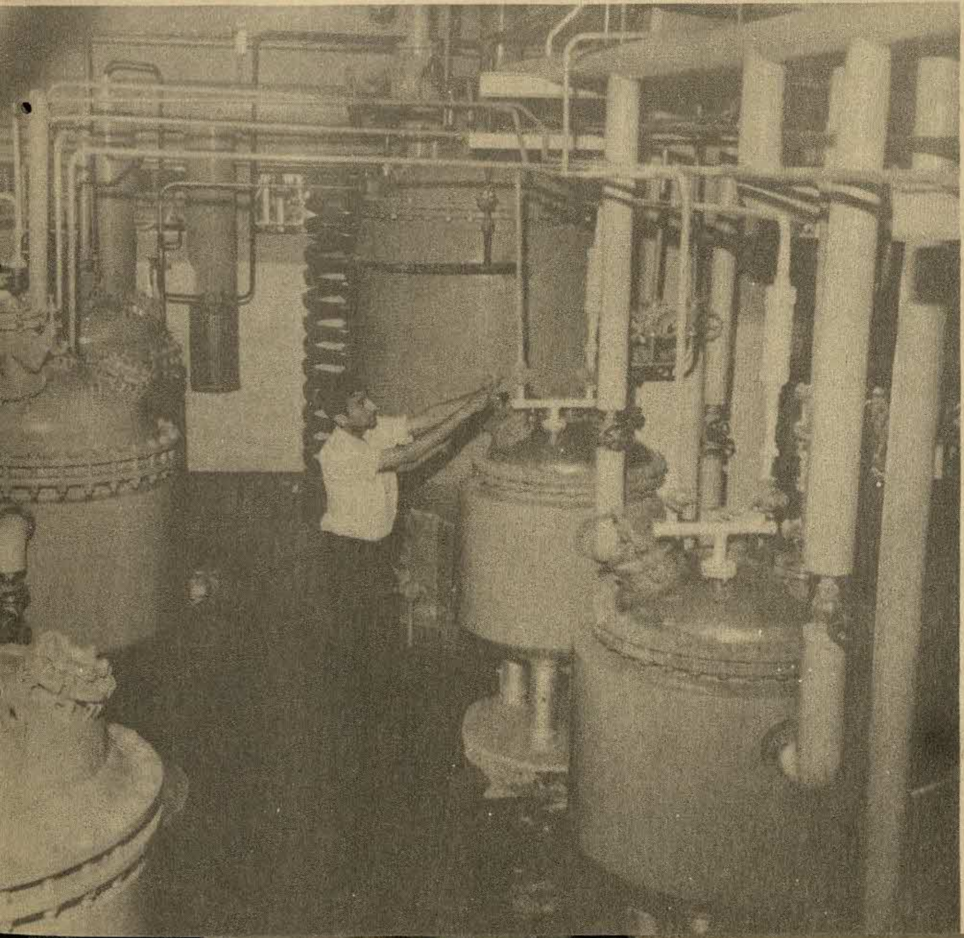
The machine-tools factory at Bangalore has been a big success. From its profits the country has been able to set up many more such projects. There are two units in Bangalore producing 2,000 machines, a third at Pinjore, a fourth at Kalamassery and a fifth at Hyderabad.

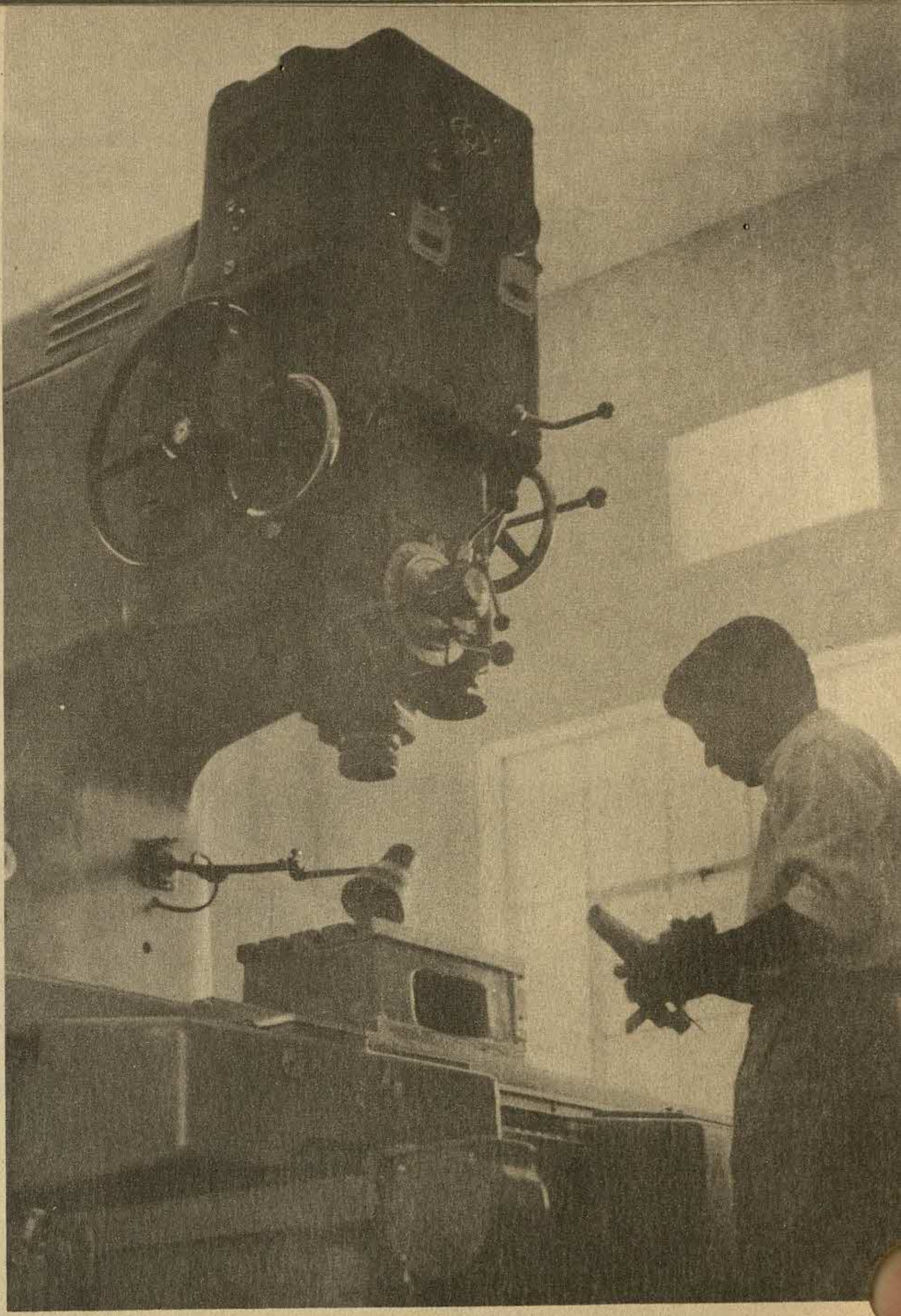


High pressure boiler plant, Tiruchi

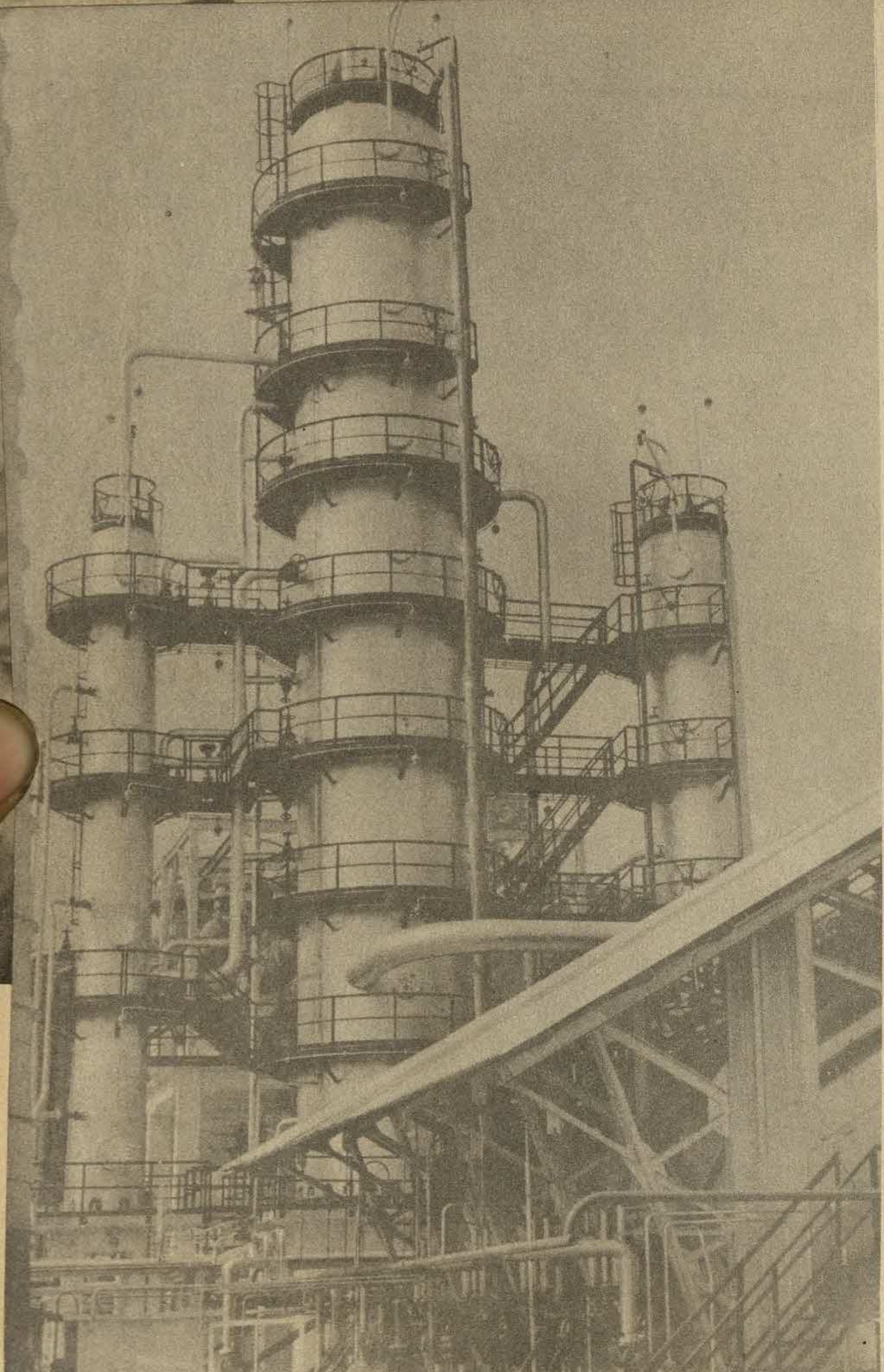
Indian Telephone Industry, Bangalore

Anti-biotics Laboratory, Rishikesh

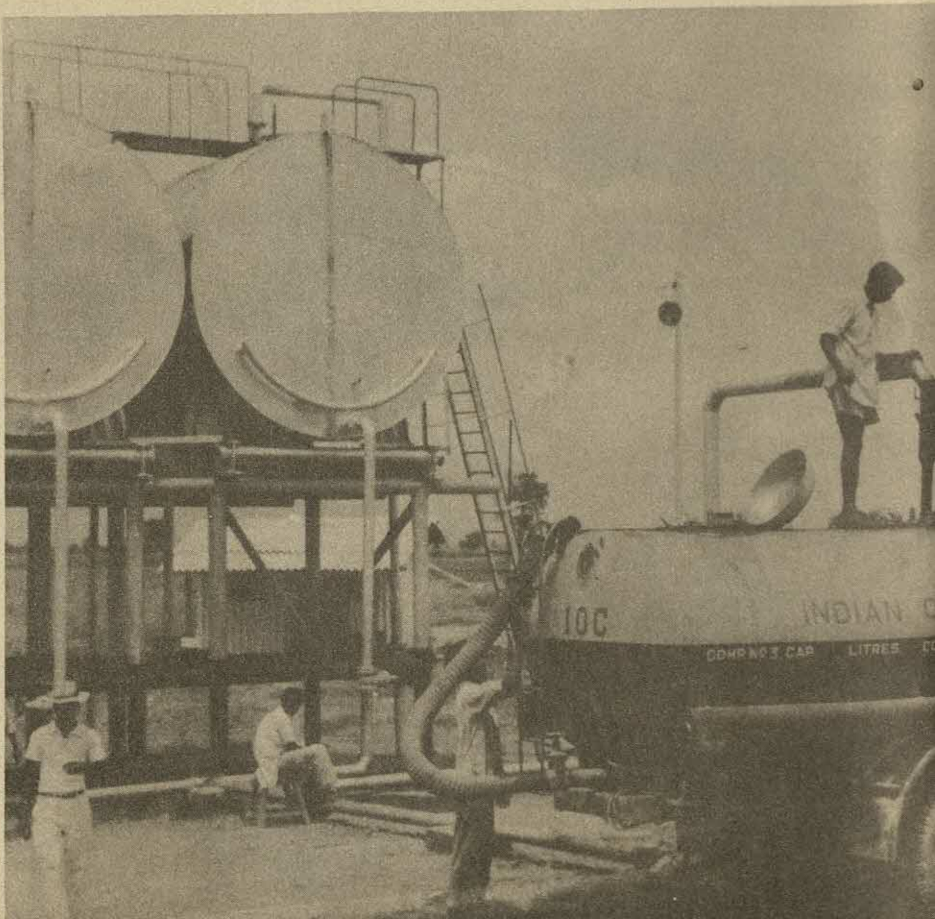




Surgical Instruments Factory, Madras



Nothing demonstrates our industrial and technological advance more strikingly than the strides we have made in oil exploration and refining, and in nuclear research. Starting almost from scratch, we have built up a capacity of six million tonnes of crude oil. Giant refineries, such as the one at Barauni, have come up and we produce nearly 10 million tonnes of petroleum products.



The three experimental atomic reactors in the country are a prelude to the generation of nuclear power. A 380-megawatt nuclear power station is under construction at Tarapur. A second of 200 MW capacity is coming up at Rana Pratap Sagar in Rajasthan and a third of 400 MW at Kalpakkam in Madras. The design and engineering of the third will be Indian.

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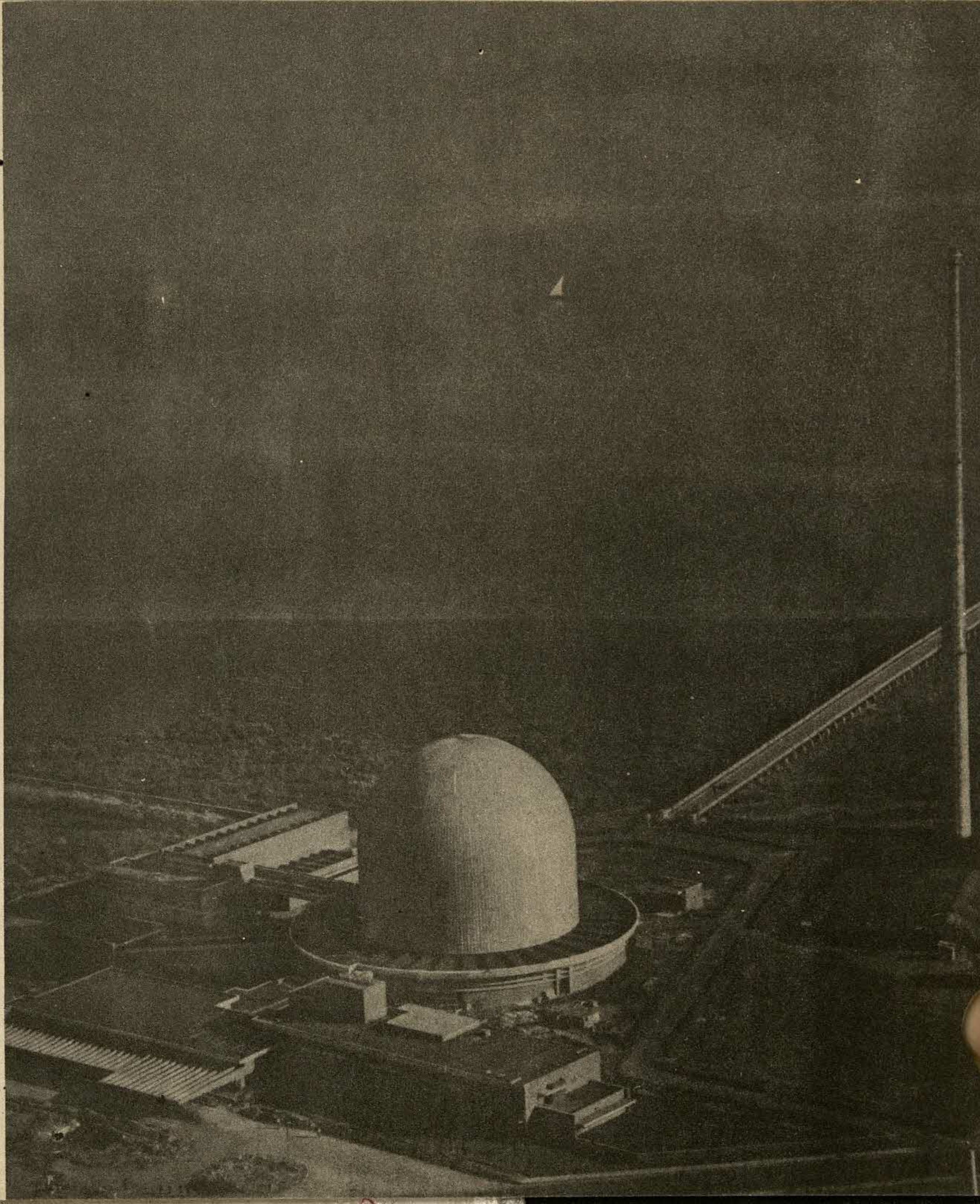
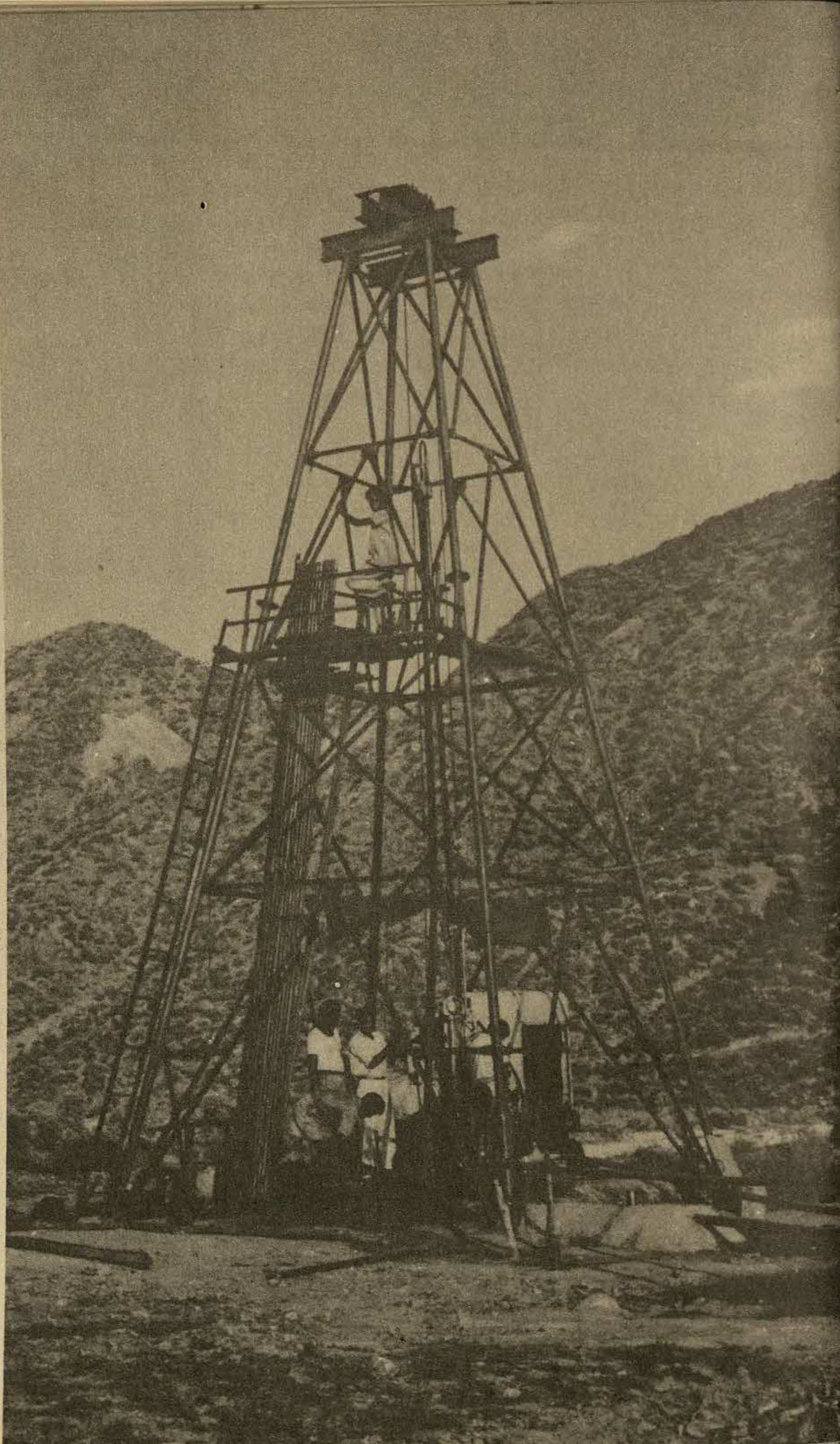
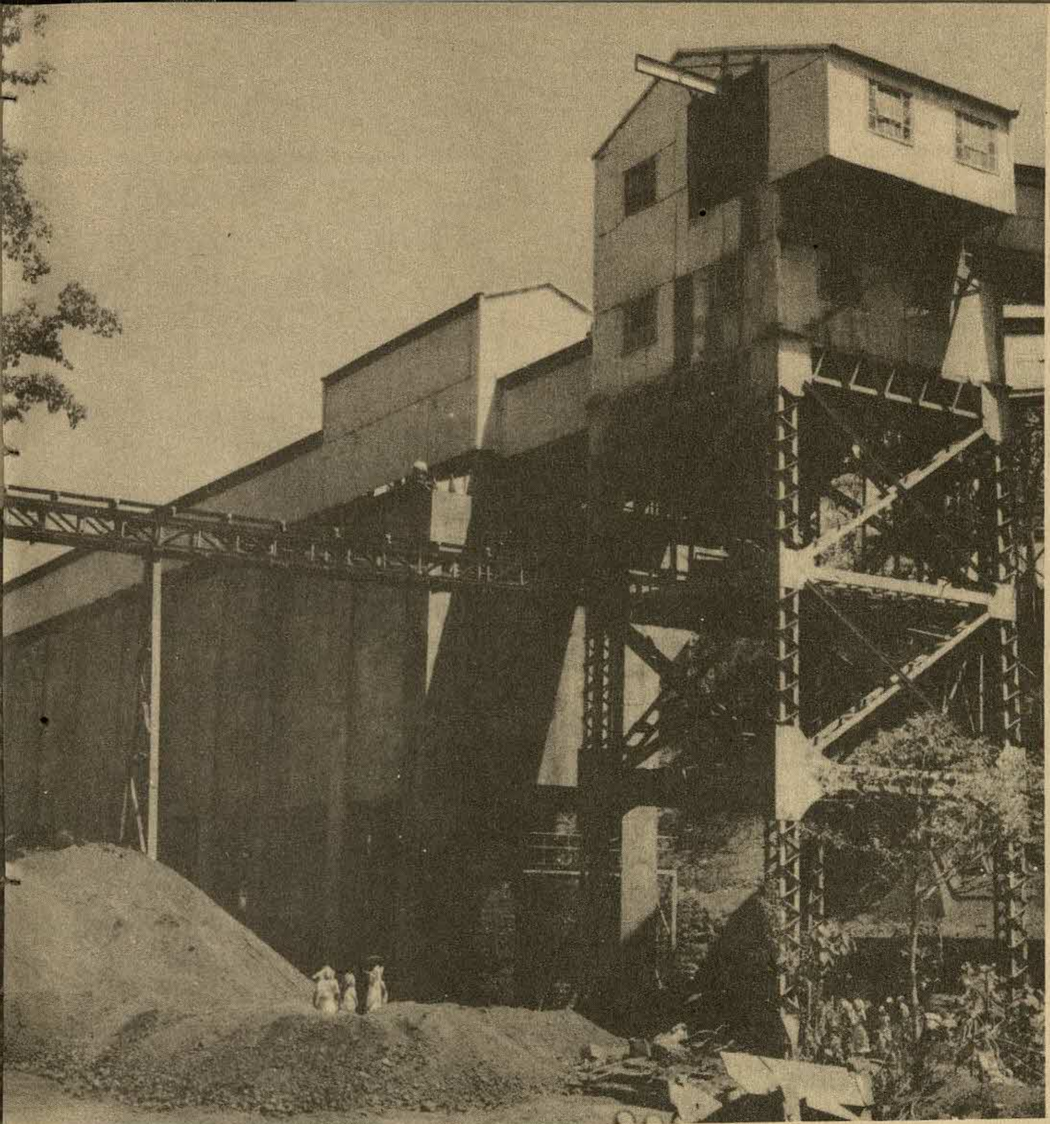


Khetri copper project

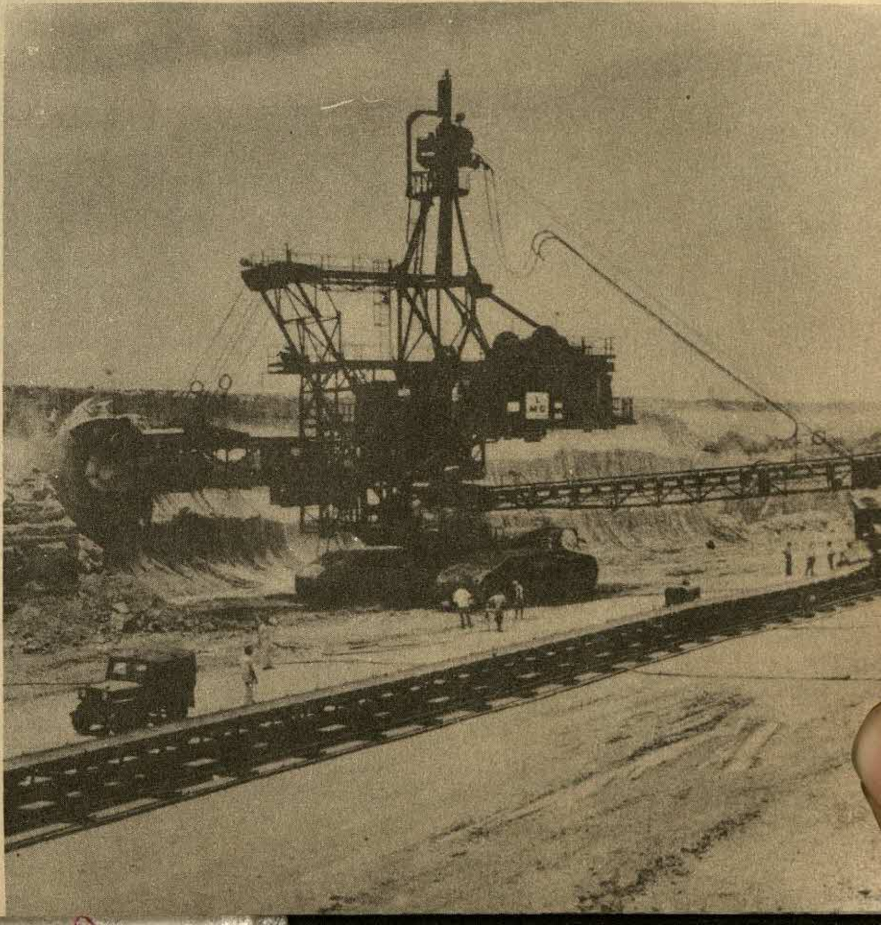
India has vast deposits of coal. During the last three plans, coal raisings have gone up from 32.8 million tonnes to 70 million tonnes.





Production of iron ore has gone up in five years from 11 million to 23 million tonnes. A large part of it is exported. The Kiriburu mines are to be expanded and other projects taken in hand to meet the growing demand of India's steel plants as well as of exports.

The lignite project at Neyveli has opened up new vistas of industrialisation in Madras State. The thermal power generated from lignite has already added to the grid more power than the total production in the State before.



Defence production has been rising steadily. Ordnance factories produced in 1965, 1,020 million rupees worth of goods. In 1947, the output was worth only fifty million rupees. The items now being turned out range from small arms to trucks, tanks and aircraft.

Breaking the distance barrier

TAKING the benefits of science and technology to the people at their doorsteps—this is what transport and communications are fast achieving in India.

Ours is a land of vast distances. Rivers and mountains abound. Yet, there is hardly a place today which cannot be reached in a very brief period of time.

The winding road to the railway station, the postman knocking at the door, people clustered around the community radio set—all these are now familiar rural scenes. What happens hundreds of kilometres away becomes known in villages in a matter of hours or even minutes. There are not many villages which do not get their daily newspapers.

India's resources are scattered far and wide. Assembling them at production centres takes a lot of effort.

Prosperity flows into the villages both ways—receiving the benefits of industry and profiting by the sale of agricultural and other village produce.

The roads and railways have become part of the lives of the people to such an extent that they are almost taken for granted. Older folks will, however, recall that, not long ago, many of the villages did not have more than the most elementary communication with the rest of the country.

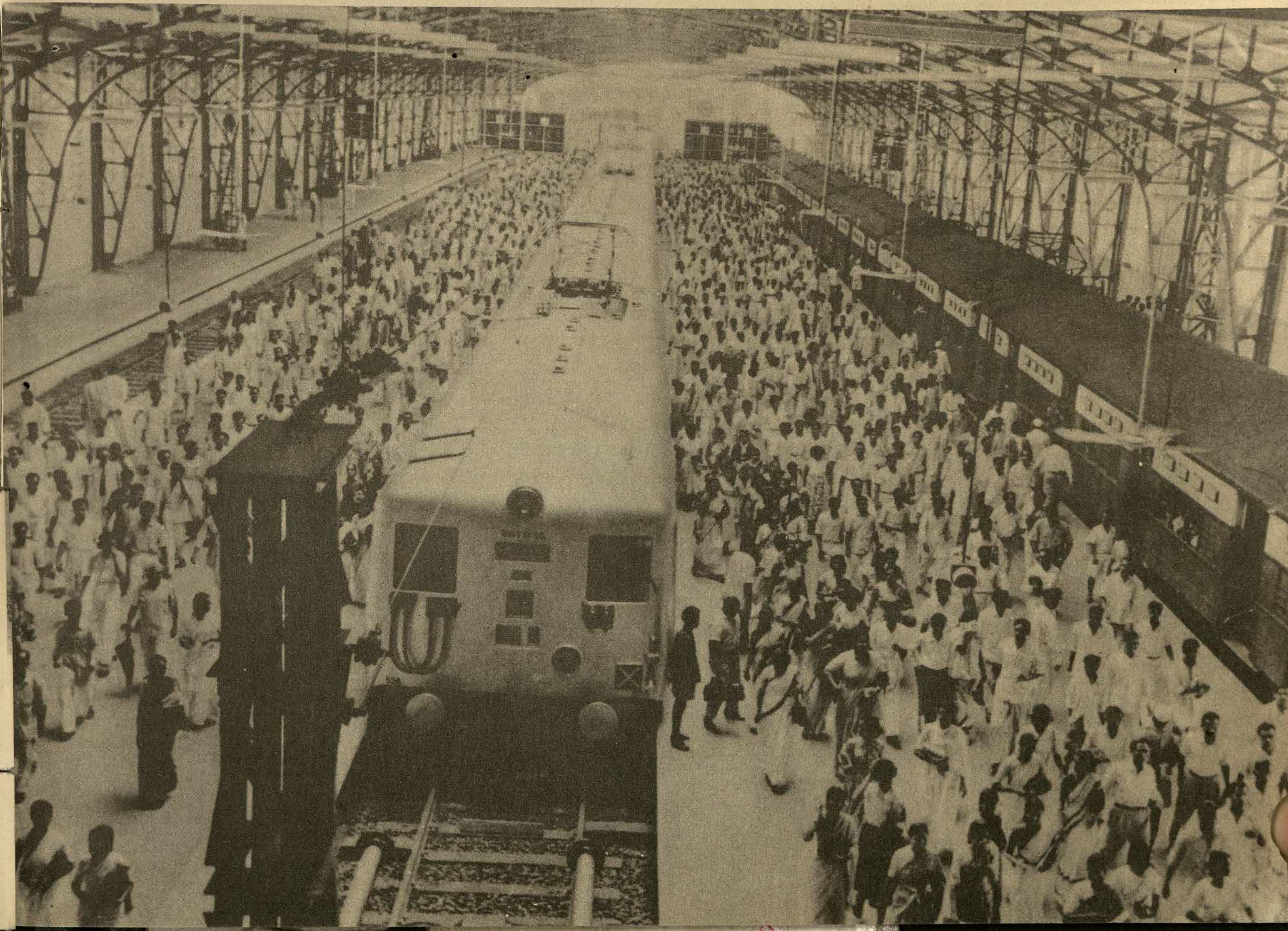
Today, the road system competes with the railways in the transport of goods and services. Most areas have been opened up. Distances have been reduced by massive bridges that gracefully span rivers, by tunnels that cut through solid rock and by aircraft which connect the remote ends of the country. The fast-developing communications are making this vast land familiar to all its people. Travel has become common. With it, conditions of travel have greatly improved.

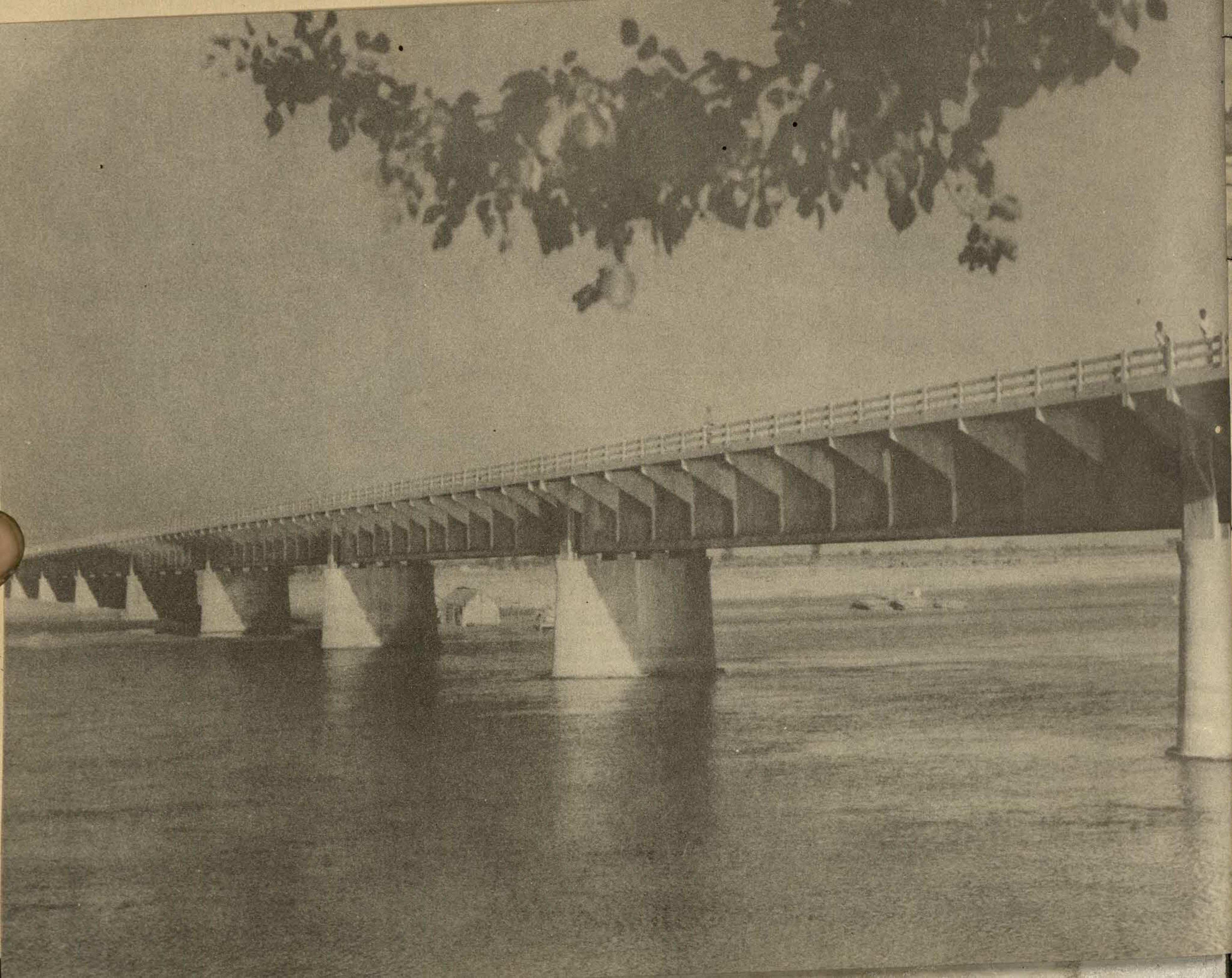
With the developing trade relations with other countries of the world, our port capacity and our shipping tonnage are also steadily going up.

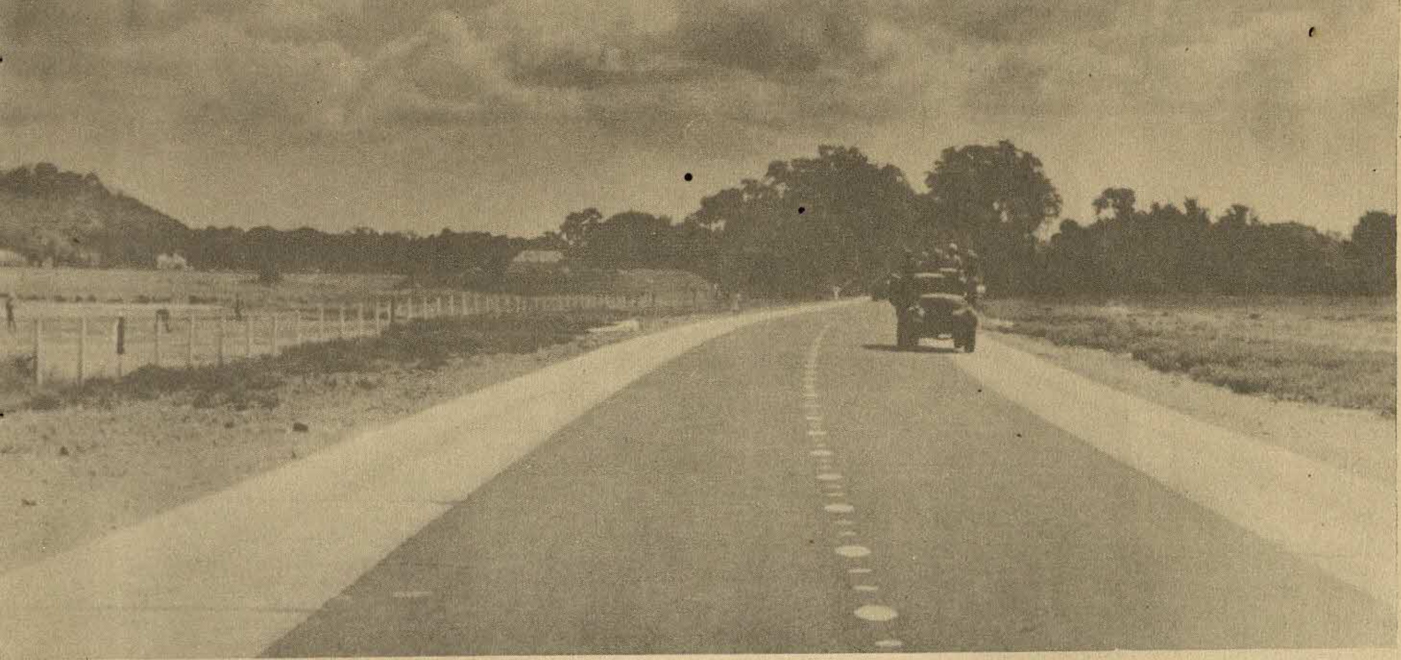
Modern transport, appearing side by side with the traditional bullock cart, symbolises India's march into the present without giving up all that is beautiful in her past.

SOME FACTS

- Since Independence, the length of surfaced roads has doubled, the length of unsurfaced roads has almost trebled, and the number of motor vehicles has gone up fivefold.
- Two thousand million people are carried by the railways every year—a twofold increase.
- The freight hauled by the railways has gone up during the plans from 93 million to 204 million tonnes.
- Indian railways are the second largest in the world, employing 1.3 million workers.
- Ten thousand trains are run every day.
- The first locomotive was built in India only in 1950. Since then the Locomotive Works at Chittaranjan has gone a long way. Now it produces electric as well as steam locomotives. Diesel locomotives are made at Varanasi.
- Wagon production has gone up twelvefold in the three plans. We now export wagons.
- Shipping tonnage has risen fourfold.
- The Visakhapatnam Shipyard has built 34 ocean-going ships.
- Cargo handled by Indian ports has gone up from 20 million tonnes in 1950-51 to 48.4 million tonnes in 1964-65. India now has seven major ports.
- There has been a sixfold increase since Independence in the number of passengers carried by the airways. In 1964-65 Indian air services flew 52.2 million kilometres and carried nearly one and a half million people. Air India, rated among the most profitable international airlines, flies to 22 countries.
- Posts and Telegraphs, India's second largest public undertaking, employ almost half a million people.
- In the three plans, the number of post offices has gone up from some 36,000 to over 97,000. Most of them—88,000—are in villages.
- The number of telephones has gone up from 120,000 in 1949 to nearly 800,000 in 1965.
- There has been a rapid increase in broadcasting facilities. All India Radio has 34 stations and 17 auxiliary centres, broadcasting in 29 Indian and foreign languages and 82 tribal dialects.

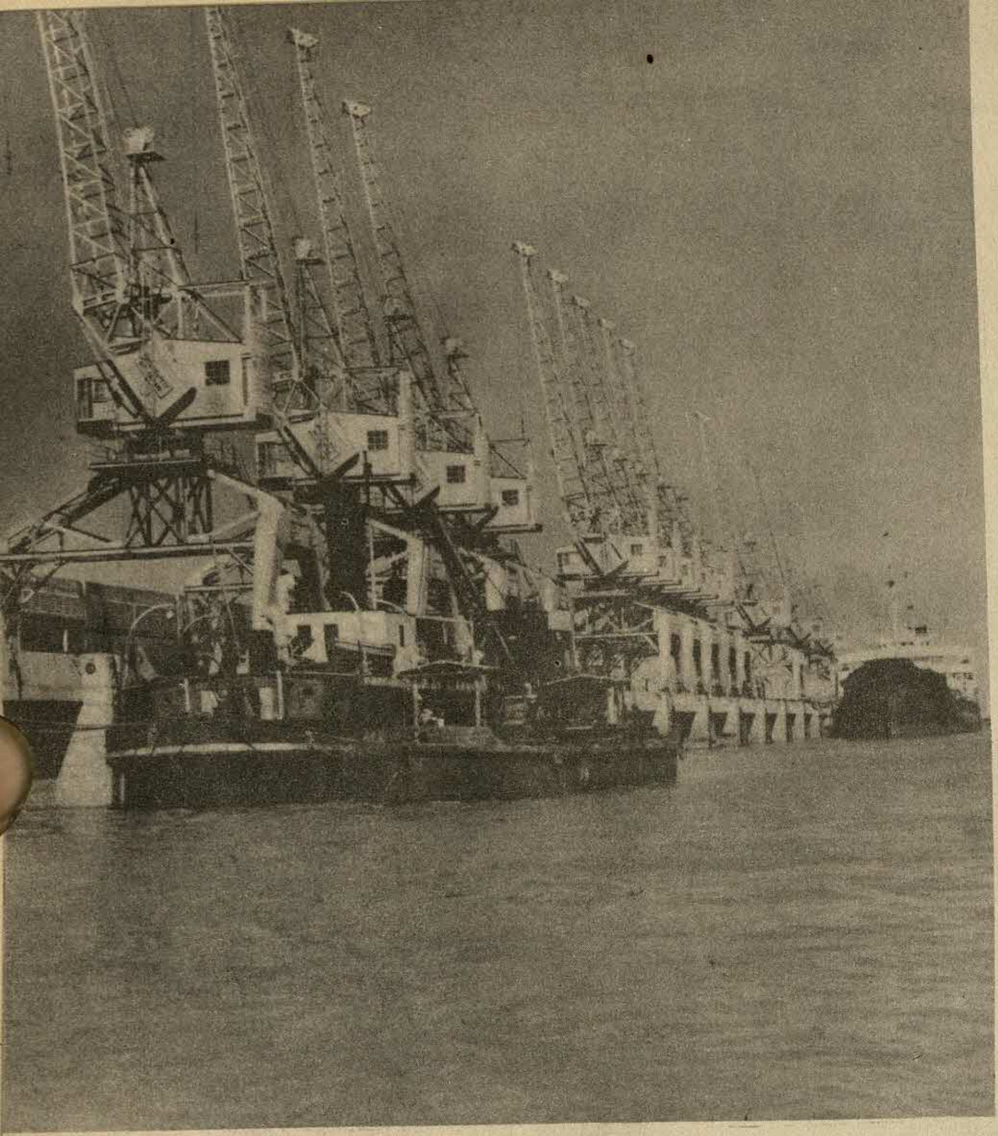




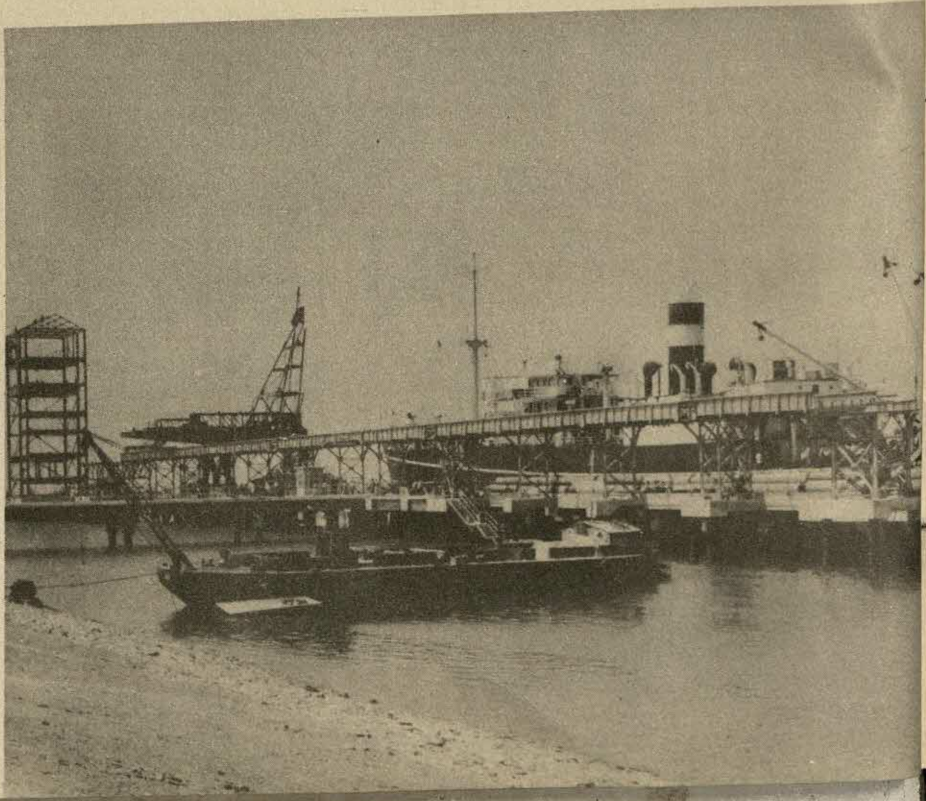


Through hills and plains, amidst snowy peaks and cutting through solid rocks, roads have been built throughout the length and breadth of India. Long-distance road transport has become a major means of travel for our rural people. The length of the roads in the country has trebled since Independence, and the number of motor vehicles on the road has increased fivefold.

Strengthening India's unity and economy are the bridges that span the mighty rivers. About 140 major bridges have been built. These have made a big difference to travel and communications and to the movement of goods and services. The Ganga bridge near Mokameh built at a cost of Rs. 160 million plays a vital role in Bihar's life by linking its north and south regions.



Two major ports have been built, one at Kandla on the west coast and the other at Paradeep on the east coast. Facilities at the other ports have been expanded and modernised. A new all-weather port is also being developed at Haldia in the Hooghly estuary.



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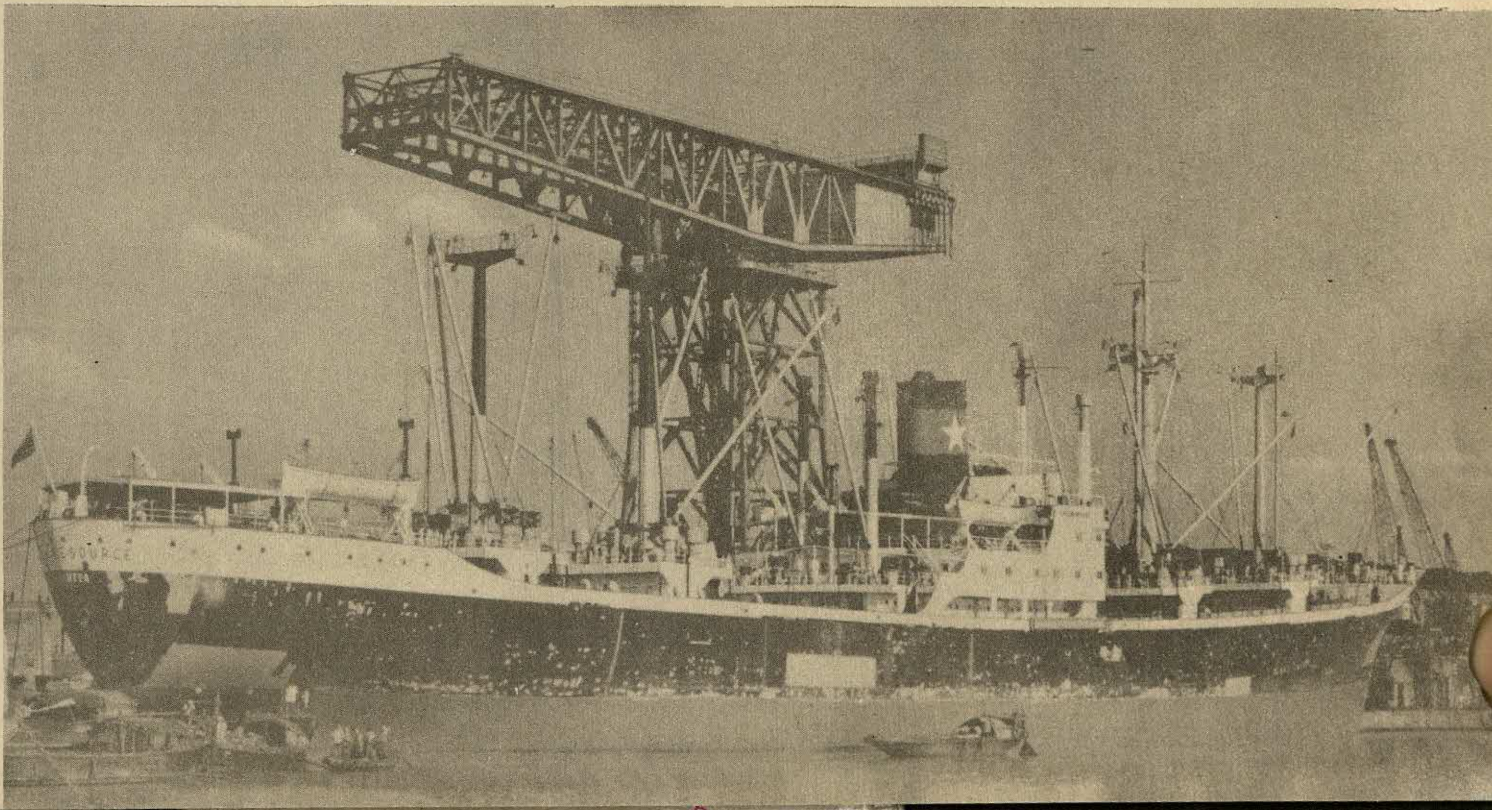


Corresponding to the expansion of ports, there has been a large increase in the traffic handled by them. They now handle 50 million tonnes of traffic every year, compared to less than 20 million tonnes at the time of Independence.

Postal facilities have been extended to the remotest villages.

There is hardly a hamlet in India without a radio set.

For the builders of tomorrow

OUR many-sided progress would have been transient and illusory if steps had not been taken early in the life of free India for the education of our children. Today. the superstructure of our modern development rests securely on the firm foundation of our schools and colleges in town and country.

When we launched the programme of national reconstruction, we were faced with the reality of pervasive illiteracy. With vast masses of people unable to write or read, catching up with the pace of science and technology seemed a distant dream. The planners approached the problem from the long-term as well as the short-term point of view. While facilities and inducements were being created for children to go to school, higher education was encouraged in a number of ways so that, in a short period, India could have a sizable number of graduates in various branches of learning.

Illiteracy is now on the way out. Four out of every five children are at school. As they grow, the rising generation will have almost none who cannot read or write.

The village school is becoming the pivot of changing India. It is not only the place where children are taught the three R's, it is also the place where they learn of their country and its problems. It is also the place where, increasingly, children get nutritive meals at midday. There are schemes to distribute text-books free among the poor students.

The school is the place of opportunity for our boys and girls.

As schools come up in every hamlet, the problem of illiteracy slowly recedes into the past. Increasingly India's task in the field of education is to open more institutions of higher learning. These, too, are coming up in large numbers. There is now a rush for admissions, indicating the pace of educational progress.

Education is a great leveller. Within the portals of a school or a college, differences of region or caste have no meaning and as our young men and women go through their courses of learning, their petty differences are dispelled by new enlightenment.

Women's education is making rapid strides. The political movement under Mahatma Gandhi developed in our country the tradition of initiative by women and this tradition continues in the form of ever-increasing rush of girls to schools and colleges.

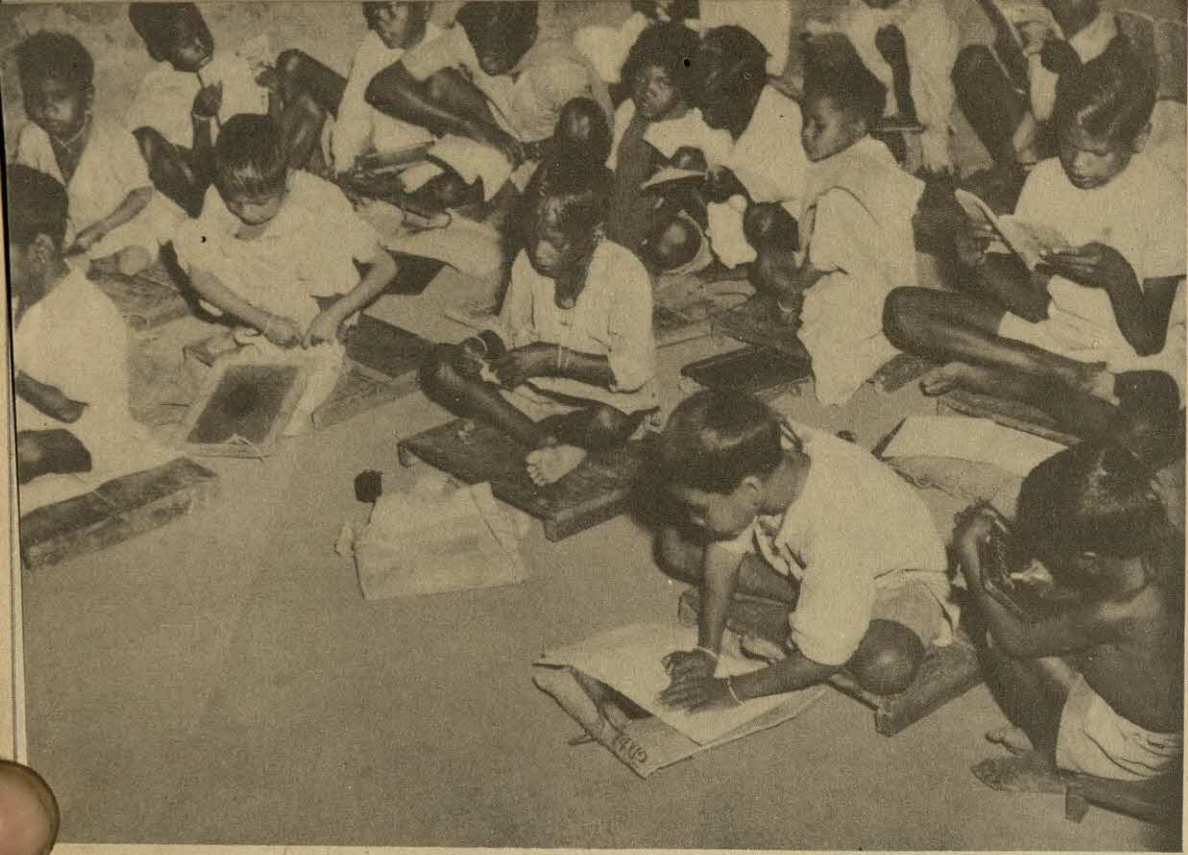
Students who are economically or otherwise backward receive a large number of scholarships. There is also assistance to children with merit.

Wisely did we plan education in a big way; for this assures our continuous economic and cultural advance.

SOME FACTS

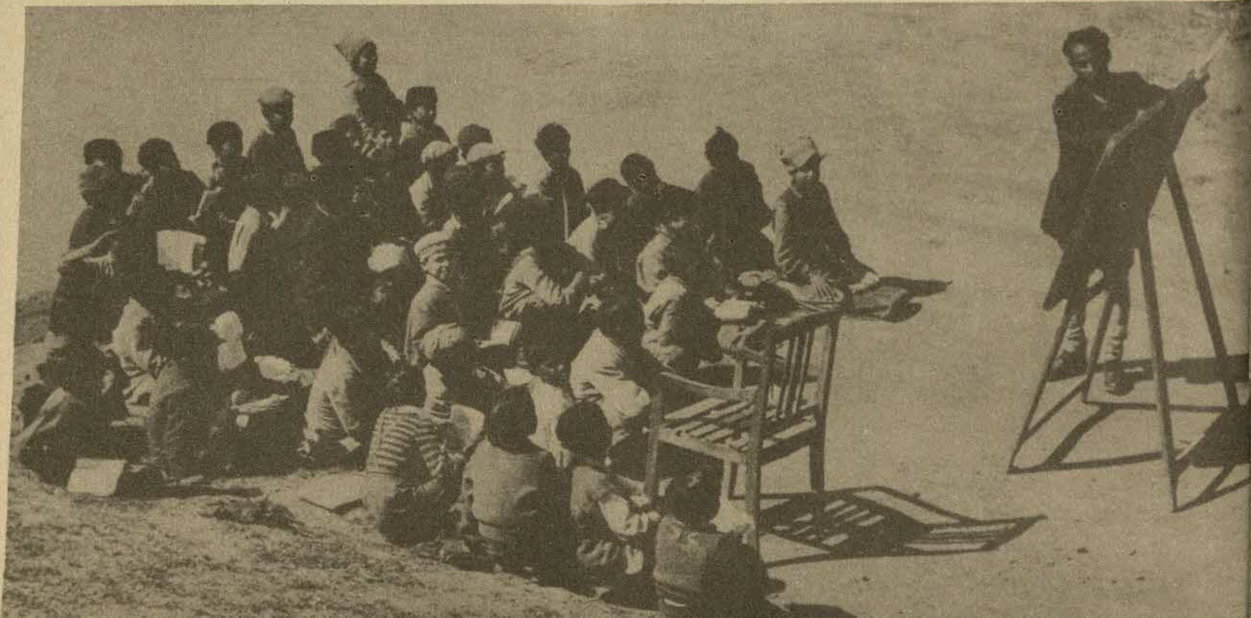
- In 1947 eighty-five per cent of our people were illiterate. Today four out of every five children under eleven are at school.
- In fifteen years of planning the number of school-going children has gone up threefold from 23 million to 68 million.
- The number of girls going to school has gone up from 6 million to 22 million.
- The number of students in colleges has increased fivefold.
- The outlay on merit scholarships has grown from Rs. 27.5 million to Rs. 350 million.
- India is probably next only to the Soviet Union and the United States in the number of engineering and technology graduates turned out every year.
- In technical education the number of students taking diploma and degree courses has gone up from ten thousand to seventy-five thousand.
- There are now 274 polytechnics which take in over 48,000 students. About 98,000 skilled craftsmen are trained every year under a separate scheme.
- There are now more than 12,000 scientific research workers in India.
- The 27 national laboratories and institutes employ 3,000 scientists.
- The Atomic Energy Establishment has three reactors and has designed and fabricated a uranium plant, a thorium plant and a plutonium separation plant.
- Some 600 science periodicals are published in India.

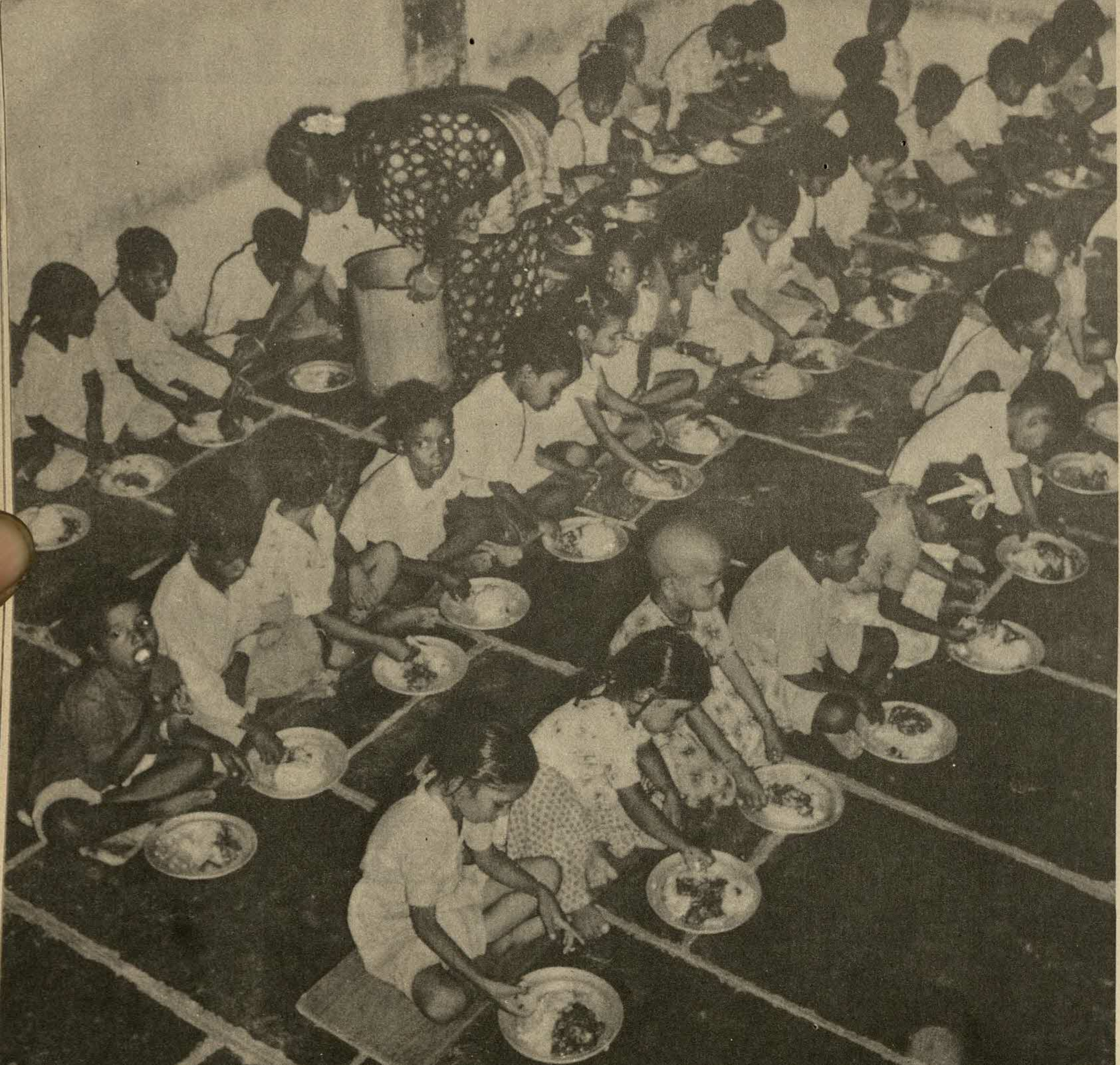
The village school is at the base of India's economic and social revolution. In fifteen years, the number of school-going children under 17 has increased from 23 million to 68 million. There are as many as 500,000 schools today, with nearly two million teachers.



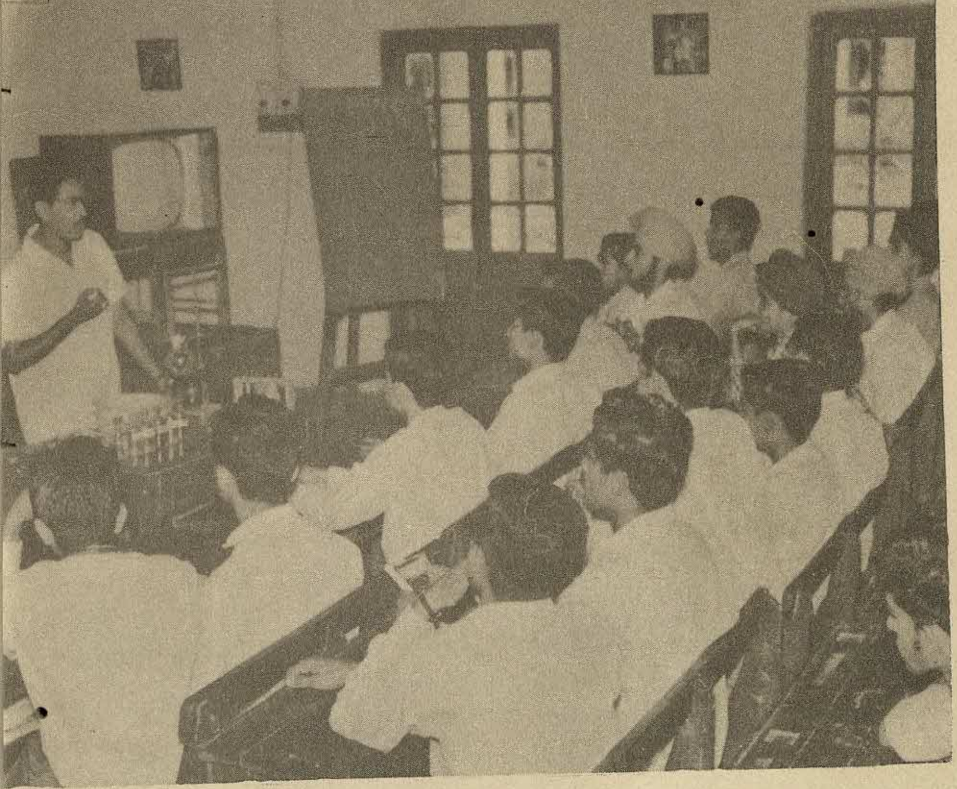
The problem of buildings for schools is being solved by local ingenuity. In many places, schools are housed in improvised sheds. In quite a few others, classes are held amid sylvan surroundings beneath trees or atop hills. Such schools are quite common in Kashmir (below) and NEFA (right).

The schools programme has unleashed fresh enthusiasm among the children and their parents. The earlier resistance of the parents to the idea of losing a wage-earning child for the school is slowly ending as realisation grows that education pays.



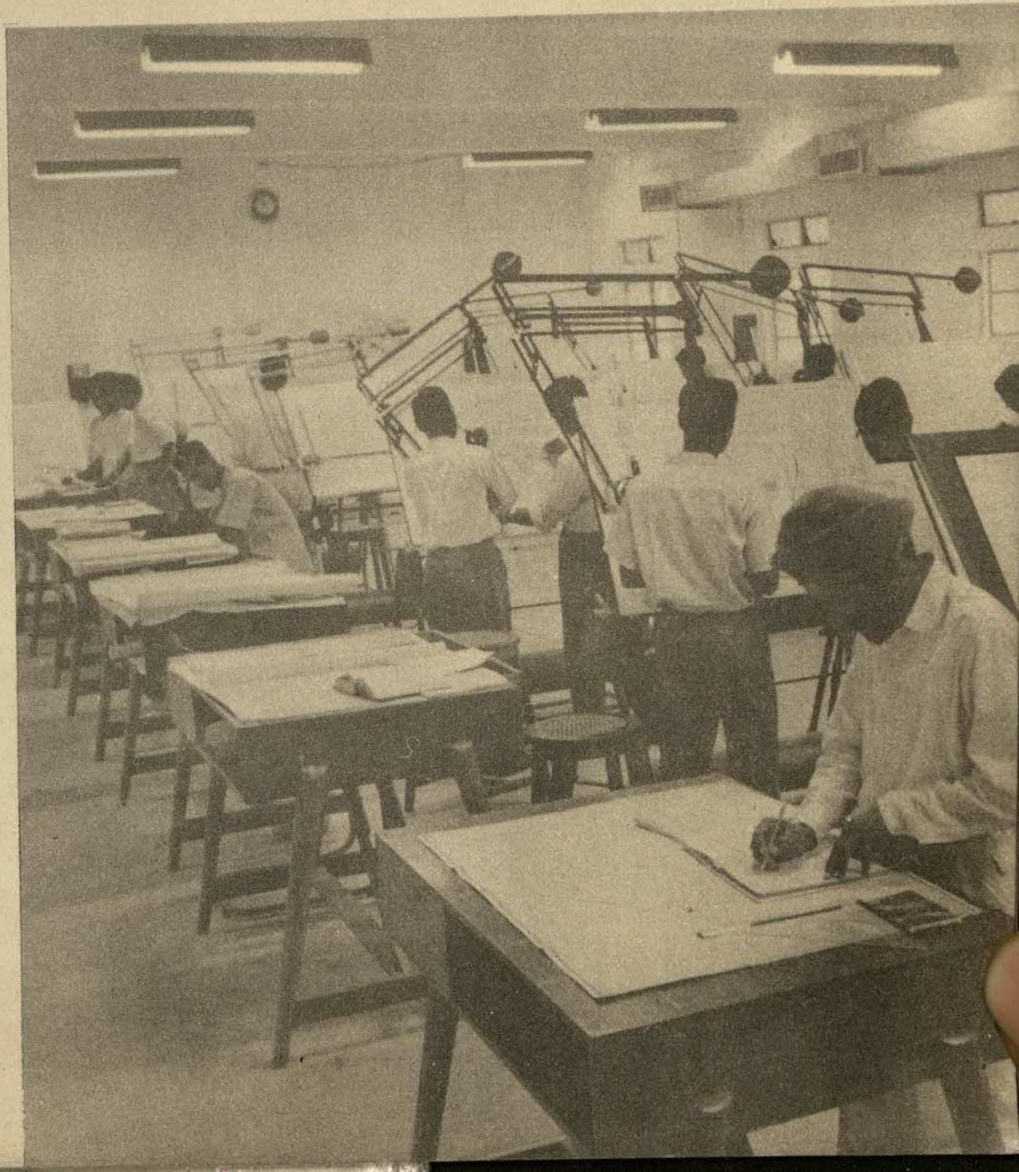


The midday meals scheme, which has been successfully tried in Madras, is catching up elsewhere too. Nine million children now benefit from the scheme. This programme not only compensates the parents for the loss of wage-earning by their children, but assures a nutritive diet for the students. In many places, milk is distributed among children. Midday meals, free text-books and free uniforms represent a concerted attack on poverty and illiteracy.



Audio-visual aids are playing an increasing role in the education of children. The regional radio stations broadcast programmes on all week-days to supplement class-room teaching. Many schools show educative and informative films to students. Television has also started making its contribution to education.

There has been a marked growth in the training of engineers and technicians to man the developing economy. Besides engineering colleges, there are 274 polytechnics. A large craftsmen training programme has also been undertaken.



The scientific temper

BY the time Independence came to India, nuclear science had burst on the world with all its explosive potential. Our country, which was known from an early day for its spirit of enquiry and which, in our own time, had given to the world eminent men of science, was yet far behind the advanced countries in scientific progress.

Science is the basis of all modern progress and India, while trying to catch up with others in the development of science and the scientific temper, had also to give an orientation to this development in favour of practical application to the problems of medicine, agriculture and industry. Having all this in view, a policy was evolved some years ago and it was outlined in a Government resolution. The Scientific Policy Resolution of 1958 declared, among the objectives, the fostering and sustaining of the cultivation of science and scientific research in all its aspects—pure, applied and educational. It was resolved that the work of research scientists would be recognised as an important component of the nation's strength.

Scientific research under State auspices is carried out mainly through the Council of Scientific and Industrial Research and national laboratories or research institutes under its control and in universities and other bodies aided by the Council.

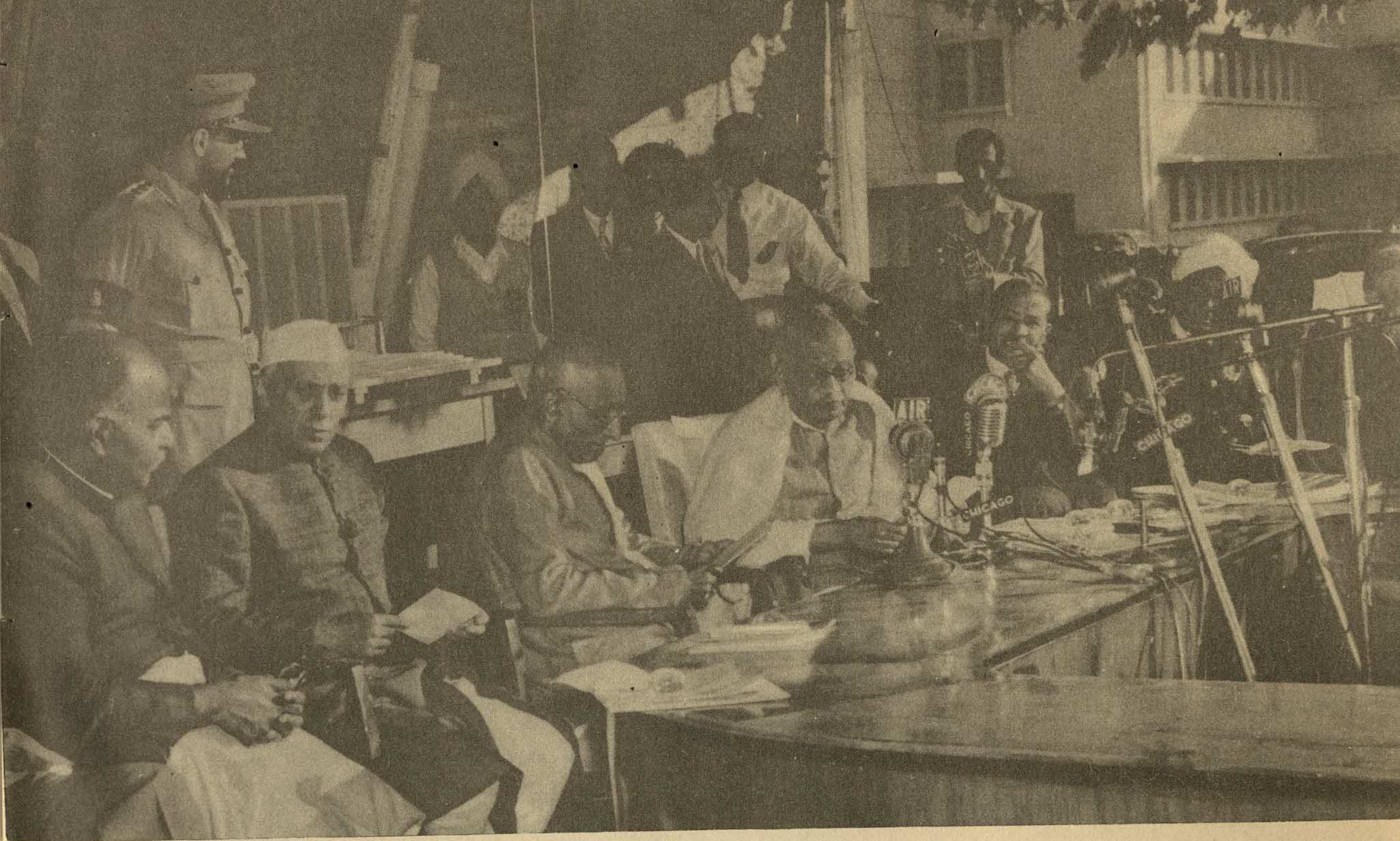
Through a system of grants-in-aid, scientists in other technical institutes, industrial laboratories and universities are enabled to pursue fundamental and applied research and develop their own special fields. There are more than 600 such schemes in progress.

Liaison units maintain contact between laboratories and industry, trade associations and other users of research.

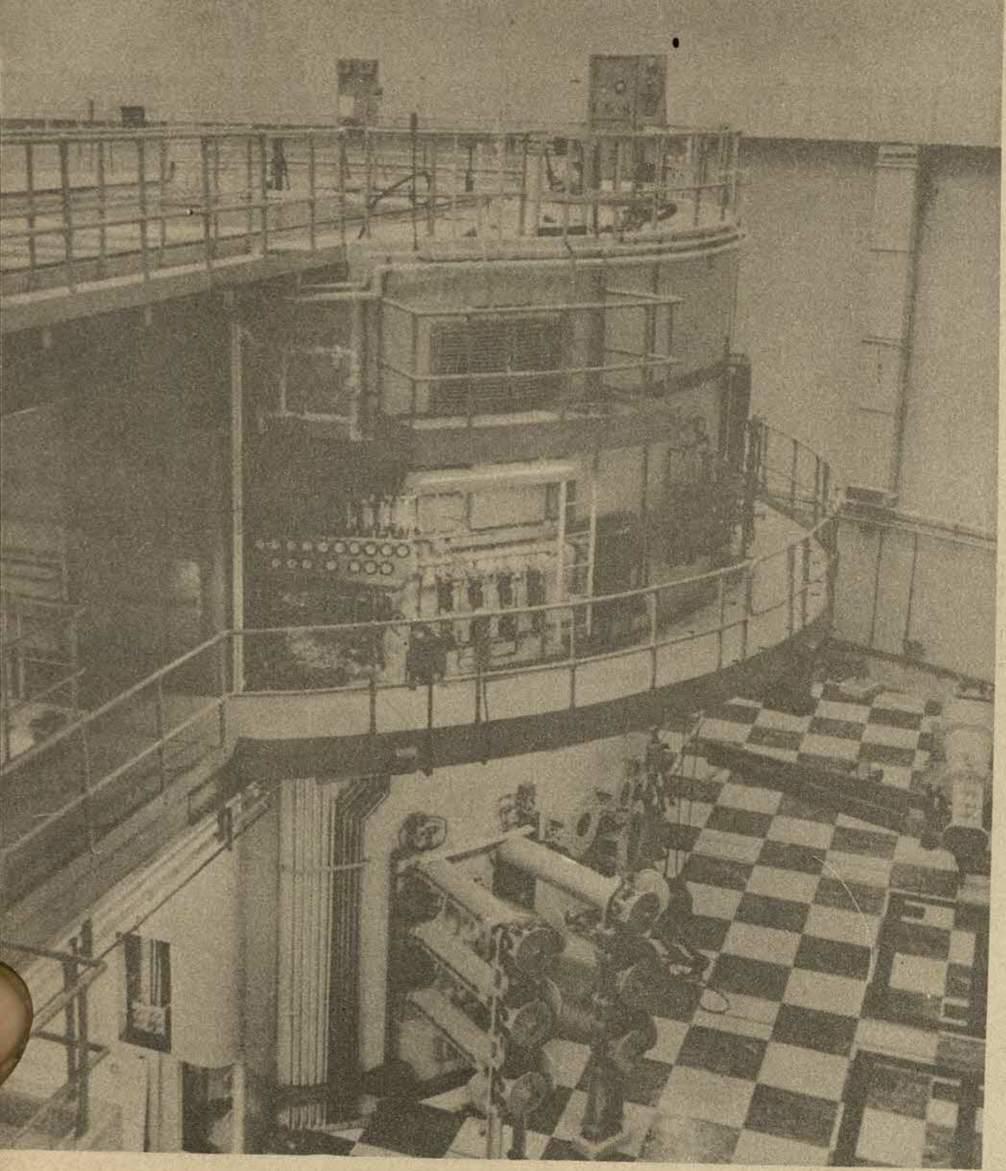
Fifty centres, known as "Vigyan Mandirs" have been set up to disseminate scientific knowledge among the villagers.

The Atomic Energy Commission, whose principal centre of research is at Trombay near Bombay, has a programme to encourage the use of atomic energy in agriculture, medicine and industry and as a source of cheap electric power. The laboratories at Trombay produce radio isotopes and labelled compounds adequate for national needs and for export. There are three reactors at the Trombay Establishment. Electronic instruments for atomic energy work have been developed for use in various national research institutions and for export.

Extensive work is being done in agricultural research. Special research is done in commodities like cotton, jute, rice, potatoes, sugarcane, coconut, tobacco, lac, oilseeds and spices. There are several institutions devoted to fisheries research. Dairying and veterinary problems also receive full attention.

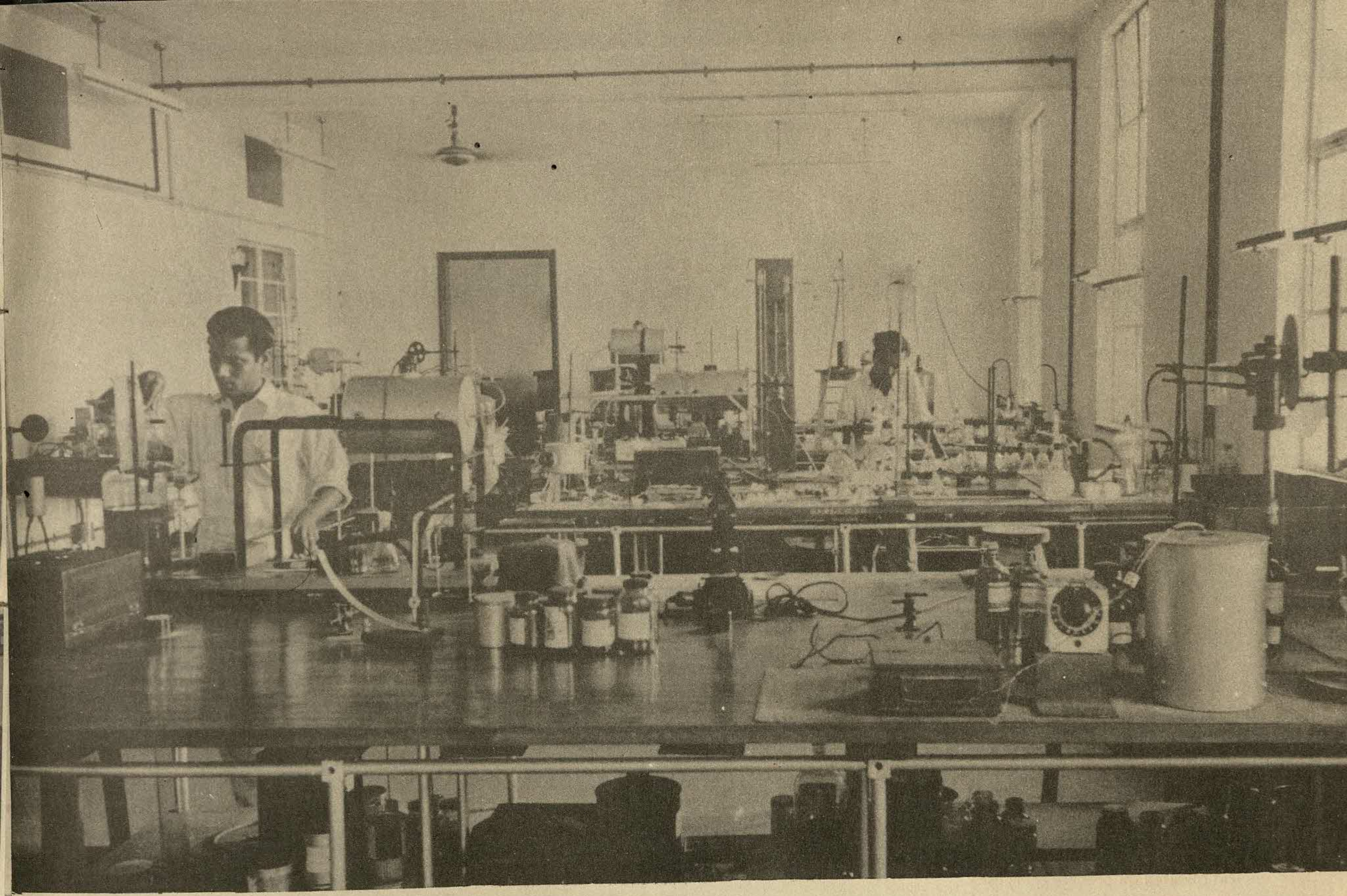


The inauguration of the National Physical Laboratory in Delhi was a milestone in free India's progress in the realm of scientific research.

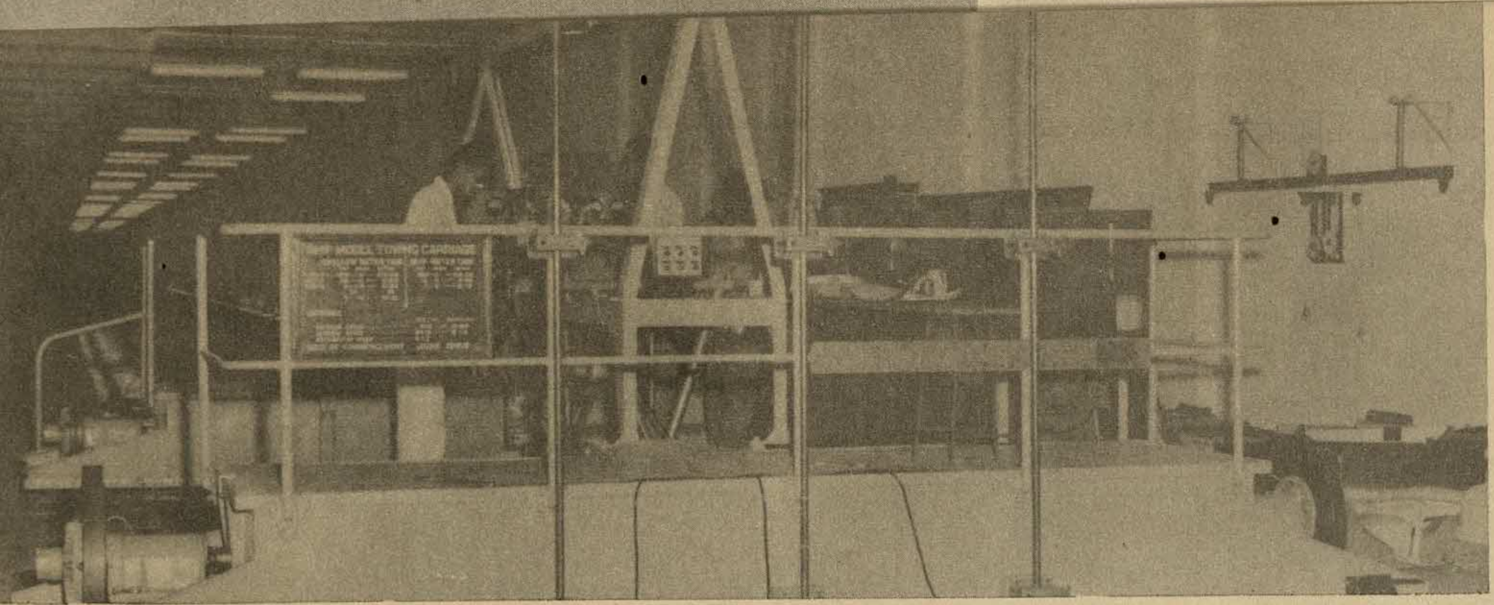


India is ranked among the advanced nations in the development of nuclear research for peaceful purposes.

Civil Engineering Institute, Roorkee

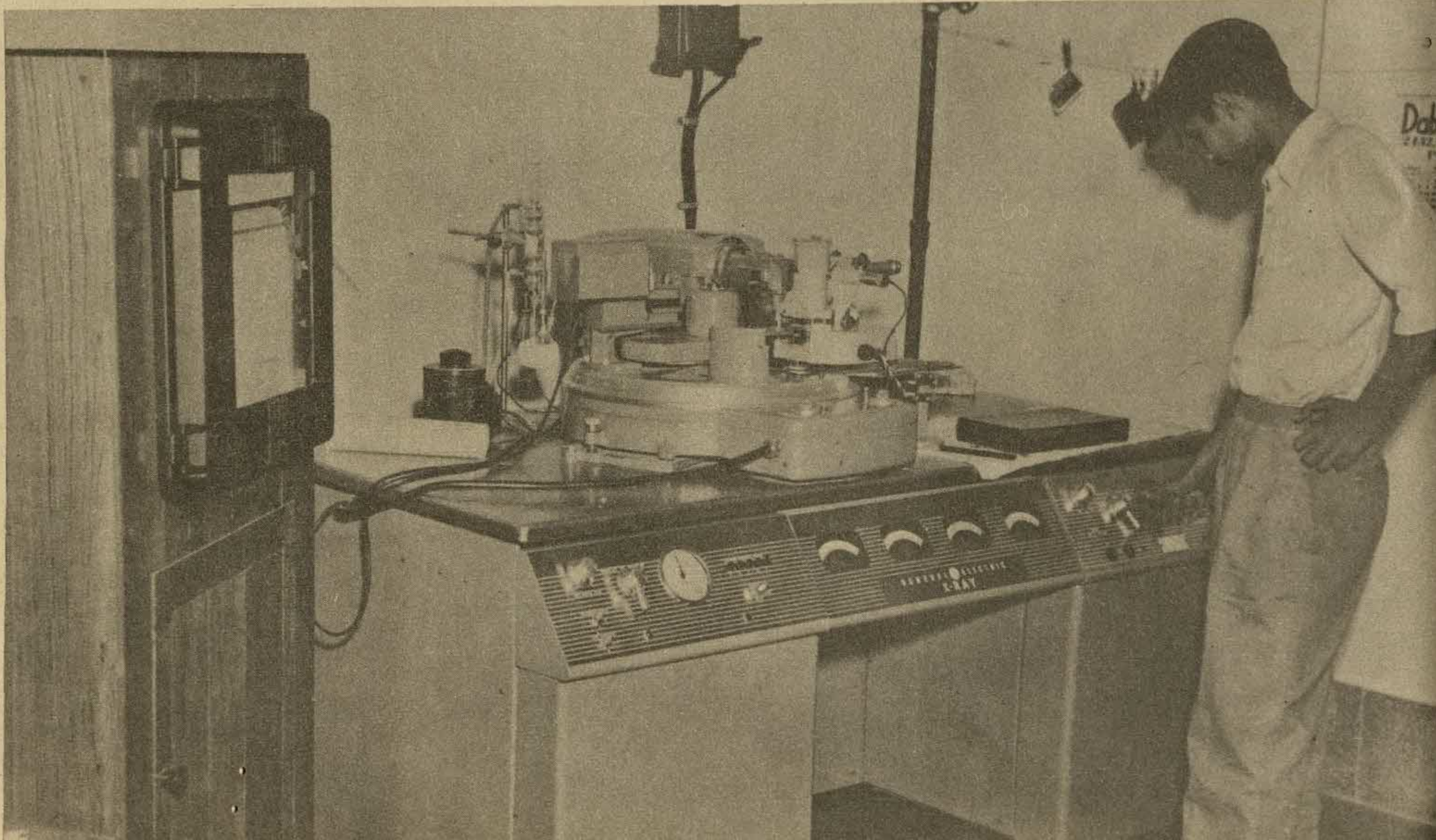


India has vast resources of energy. Its coal deposits are immense and there is promise of oil in several areas. The Central Fuel Research Institute, Dhanbad, is an instance of how research is helping in the meaningful use of indigenous resources.



Irrigation engineering is well advanced in India. Most of our dams, some of them among the world's biggest and most modern, were designed by our engineers.

The Central Water and Power Research Station at Poona does work which helps solve the problems faced by our multi-purpose projects.



National Chemical Laboratory, Poona

Central Salt and Marine Chemicals Research Institute, Bhavnagar

Lac Research Institute, Ranchi

Various problems relating to food processing, conservation and fruit technology are the subject of research at the Food Technological Research Institute in Mysore.

The Indian Agricultural Research Institute in New Delhi has well-equipped laboratories and extensive farms.

For a strong nation for a healthy people

IF education provides a firm basis of our development, the health programmes reinforce the foundation. "A sound mind in a sound body"—that is considered a good prescription for everyone. What is true of the individual is true of a nation in a broad sense.

Our under-nourished people had been prey to all kinds of ailments which weakened their stamina and often took a heavy toll of life. The steady and steep fall in the resistance of our people to disease was reflected not only in the death rate but in productivity as well.

Planning for prosperity, therefore, implied schemes to improve the health of the people. This meant many things. There was the immediate problem of controlling and then eliminating the epidemics—malaria, smallpox, cholera and the like. There, too, was the task of extending medical facilities to the villages—doctors, nurses, dispensaries and health centres.

The problem of public health has been tackled, in the years since Independence, at all levels. While the epidemic diseases were eliminated one after the other, and while a rapid expansion of hospital and other medical facilities was organised, schemes were simultaneously undertaken on a large scale for village sanitation, better housing and protected drinking water. All this has yielded results. Mortality rates have gone down steeply and the average life-span of the people has gone up from 32 to 50 and is likely to go up further in the next few years. Productivity in the factories, too, has steadily increased.

A health centre is now working in almost each of the community development blocks. More and more villages are having protected water schemes. In industrial areas, huge housing schemes for workers have been implemented.

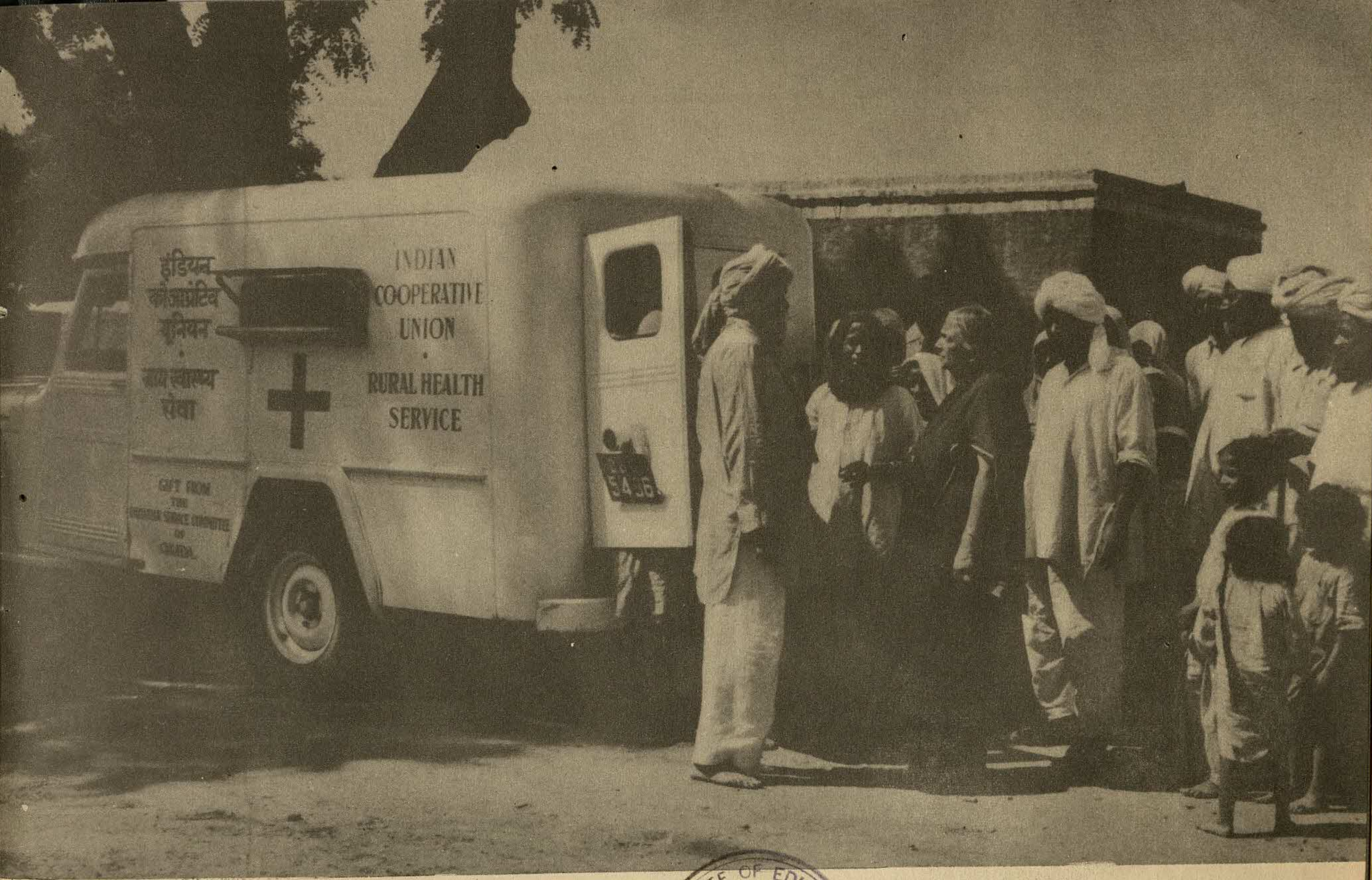
With the progressive increase in the number of medical and nursing colleges, the number of doctors and also of nurses has increased. But the full benefits of the expansion in medical services could not be secured because of the rapid increase in population.

With longer life assured to our people by schemes of medical and public health, the problem that faces India is the challenging growth in population. It should be easy to see that unless this is kept in check, not only the health schemes but every effort for a better life for the people will come to nought.

Accordingly, a big programme of educating the people in the need and ways of family planning has been launched. Indications are that the response from the people is encouraging.

SOME FACTS

- In 1947 malaria attacked 100 million people and eight hundred thousand people died. Today its incidence is negligible.
- In 1950, smallpox claimed 57,000 lives. Very few die of it today.
- Plague has been wiped out.
- In fifteen years, the death rate has been brought down from 27.4 to 16 per thousand.
- Some 224 million people have been tested for tuberculosis and 81 million vaccinated with B.C.G. There are 405 clinics and 35,000 beds for T.B. patients.
- The number of hospitals and dispensaries has gone up from 8,600 to 14,600. The number of hospital beds has doubled.
- There were very few primary health centres in 1950. Now we have 4,800 of them.
- The number of medical colleges has grown from 30 to 88 and of admissions of undergraduate doctors from 2,500 to over 11,000.
- The number of doctors has increased from 56,000 to 86,000, of nurses from 15,000 to 45,000, of midwives from 8,000 to 35,000 and of sanitary inspectors from 3,500 to 18,000.
- Some 12,000 family planning centres have been established.
- More than 800 water supply, drainage and sanitation schemes have been taken up since 1954.
- The applied nutrition programme launched in 1962-63 is in operation in over 210 blocks.
- A large scheme of working class housing is being implemented.



Hospitals on wheels visit remote areas as part of the war on disease and ill-health.

STATE INSTITUTE OF EDUCATION
BANIPUR

Nearly half the people in India have been tested for any signs of T.B. Over 80 million have been given B.C.G. vaccination to immunise them against tuberculosis.

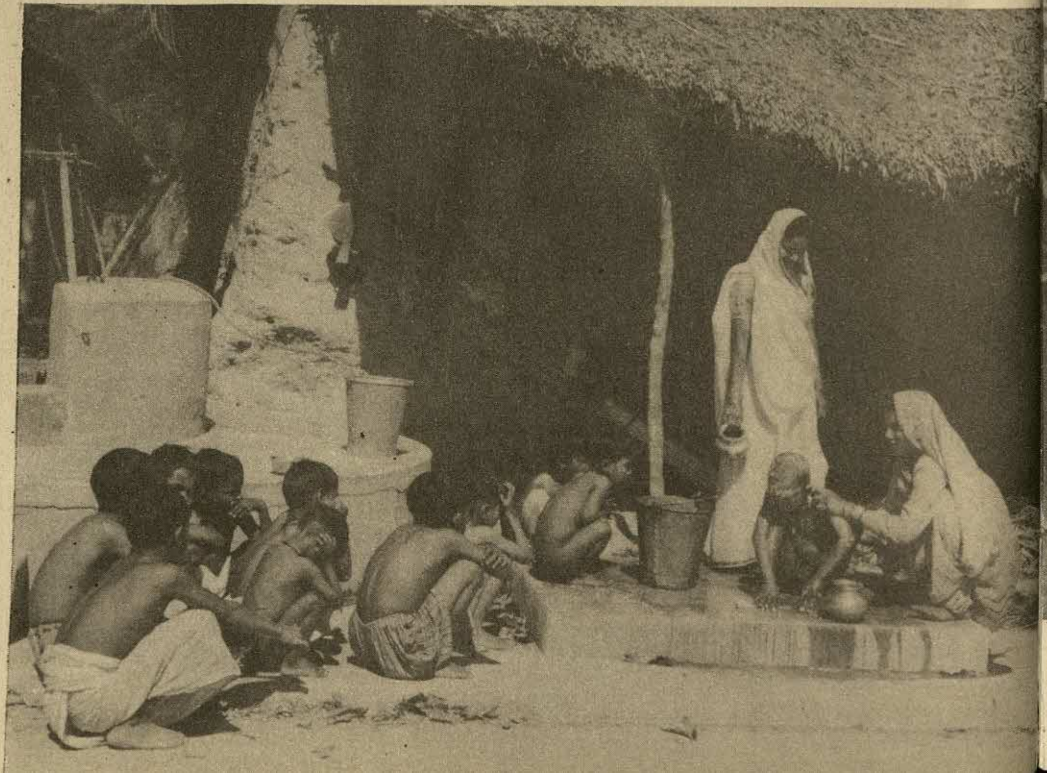
Officers of the National Extension Service have taken medical relief to tribal areas.

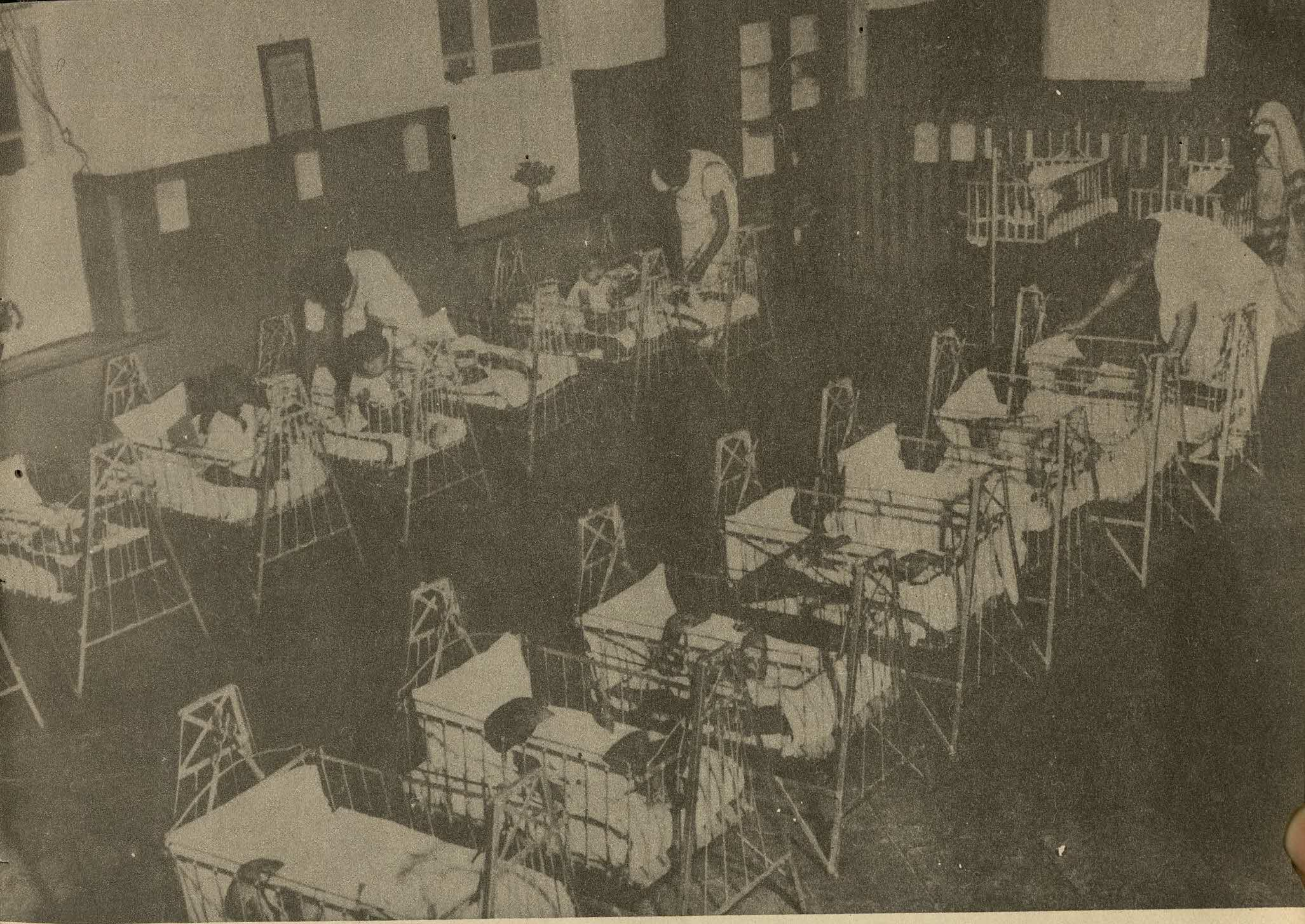
A rural dispensary

Malaria, the dread disease, which played havoc with the nation's health and stamina, has been overcome with systematic and organised eradication measures.

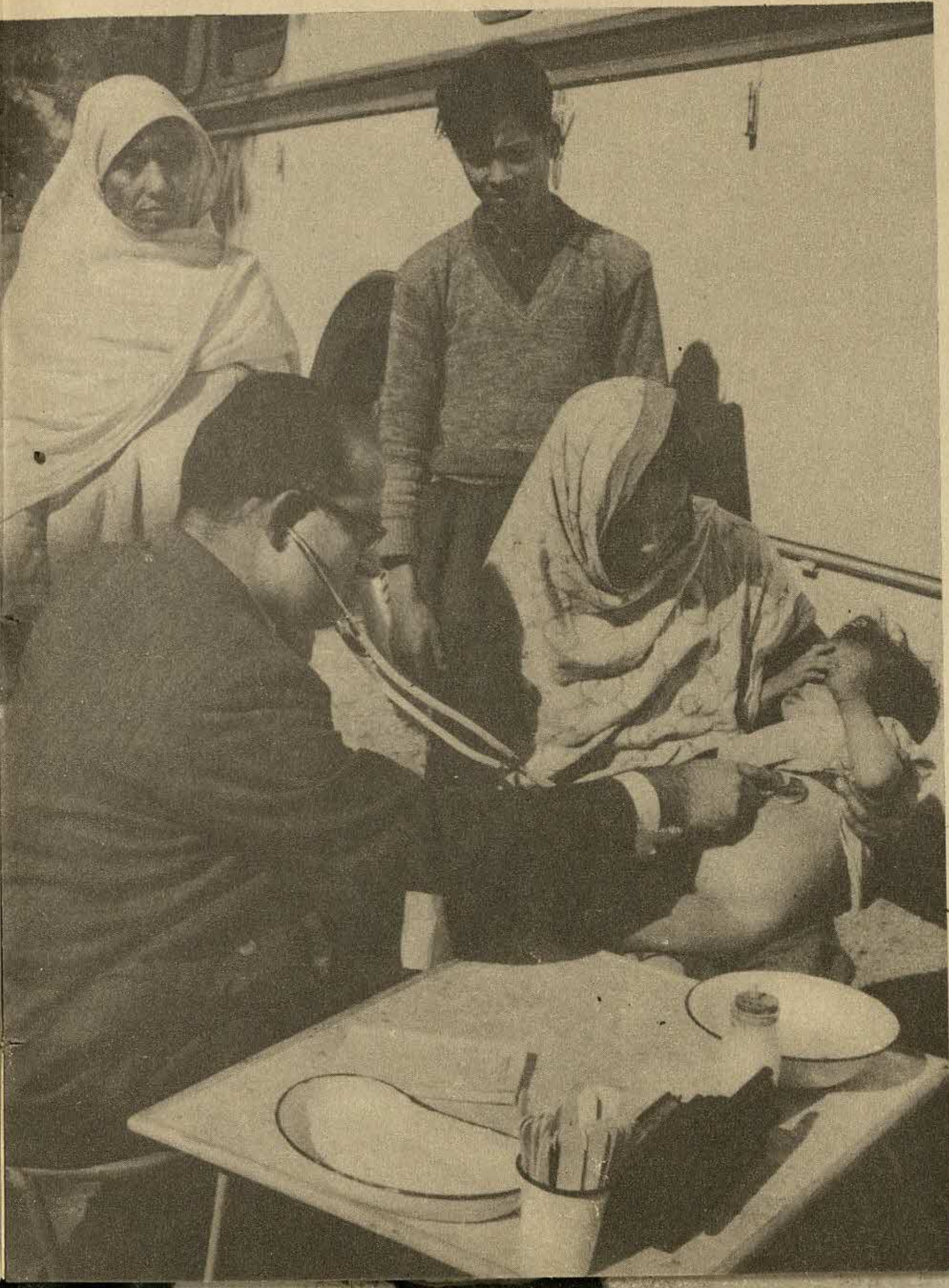
Special attention is being given to building up the health of children and nursing mothers. From 1,700 in 1951, the number of Mother and Child Welfare Centres has grown to 10,000. Special facilities are being provided for the treatment of handicapped children.

Village-level workers inculcate in children habits of personal cleanliness and environmental hygiene. Simultaneously, attention is given to village water supply and sanitation.





Increase of population poses the biggest challenge not only to the national economy, but also to public health and nutrition. A national campaign has been launched to control population. Nearly 12,000 family planning and welfare centres function in the country. More than nine million sterilisation operations have been done and a million women have taken to the "loop" so far.



Health visitors to the rural areas bring comfort to the village people with friendly assistance and advice.

Changing skyline in town and country

"A ROOF over our heads"—that, for generations, has been the ardent wish of large numbers of people.

Not many will now be satisfied with a mere roof over their heads. Whether it is the rural cottage or the urban dwelling, the trend is towards greater elegance and comfort.

Building activity has gone on in various parts of India at a tremendous pace, especially in towns. But the problem will take quite some time to get reasonably solved.

Next to food and clothing, shelter is a basic need. A house, it is true, provides shelter from sun and rain. But it is something more. It is to this something "extra" that some of the housing effort in the new townships around industrial projects and in the new colonies for workers has been directed.

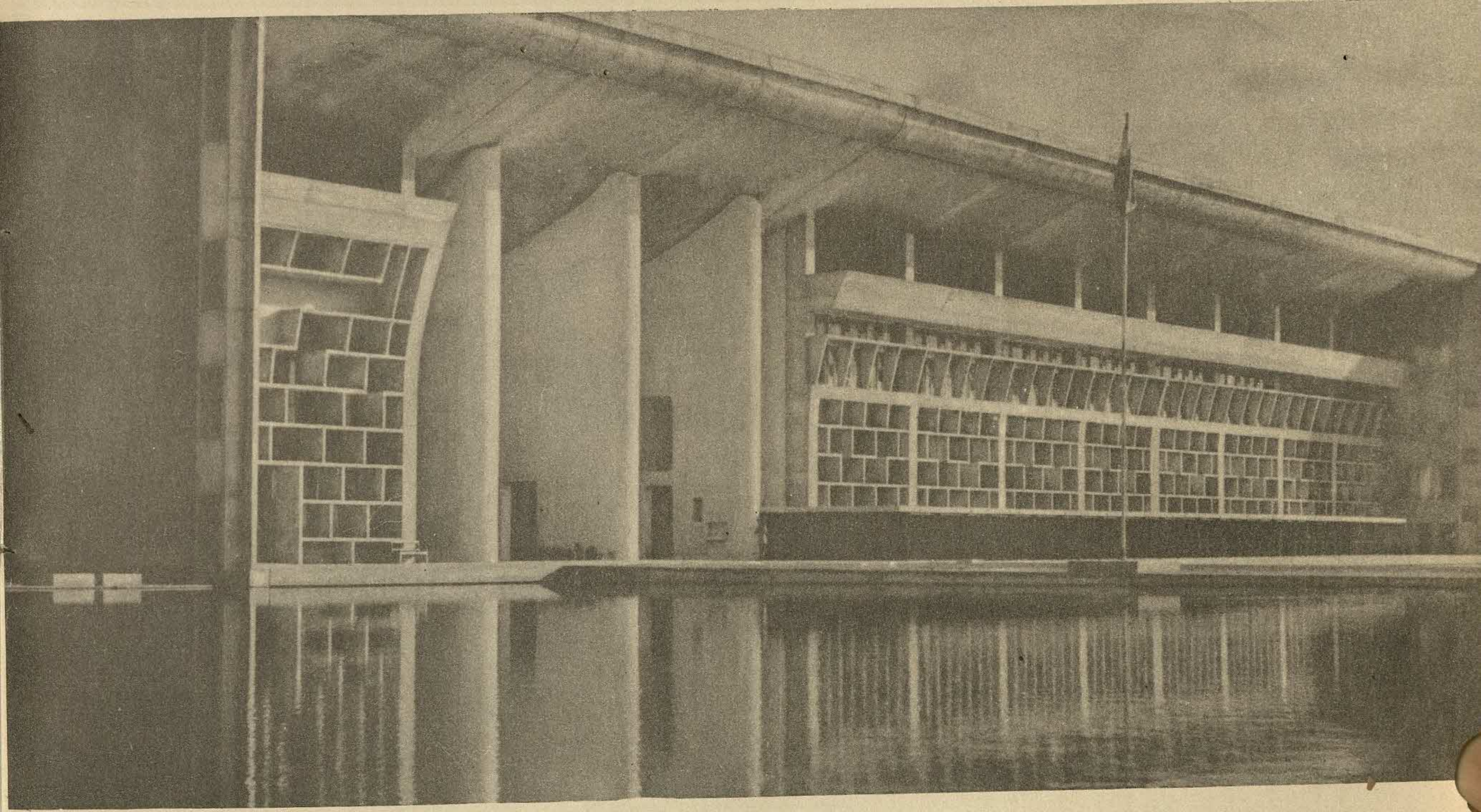
The housing problem in India is of a big magnitude requiring diversified effort and large-scale finance. A survey made at the beginning of the Third Plan showed that only a third of the urban people had *pucca* houses. In villages not even twenty per cent of the people had this facility. Altogether, it was estimated, some 66 million houses needed to be built. In the Third Plan a programme was drawn up to build 2.7 million houses in villages and 1.5 million houses in towns. No doubt the programme will be accelerated in subsequent plans. Even so, with the growth in population, the problem poses a big challenge.

A separate portfolio of Housing was created in the Central Government when the First Plan was launched. Several schemes for low and middle income groups and for industrial workers were undertaken in the following years. The Centre started helping the States and local bodies in slum clearance in a drive to make the towns healthy and beautiful.

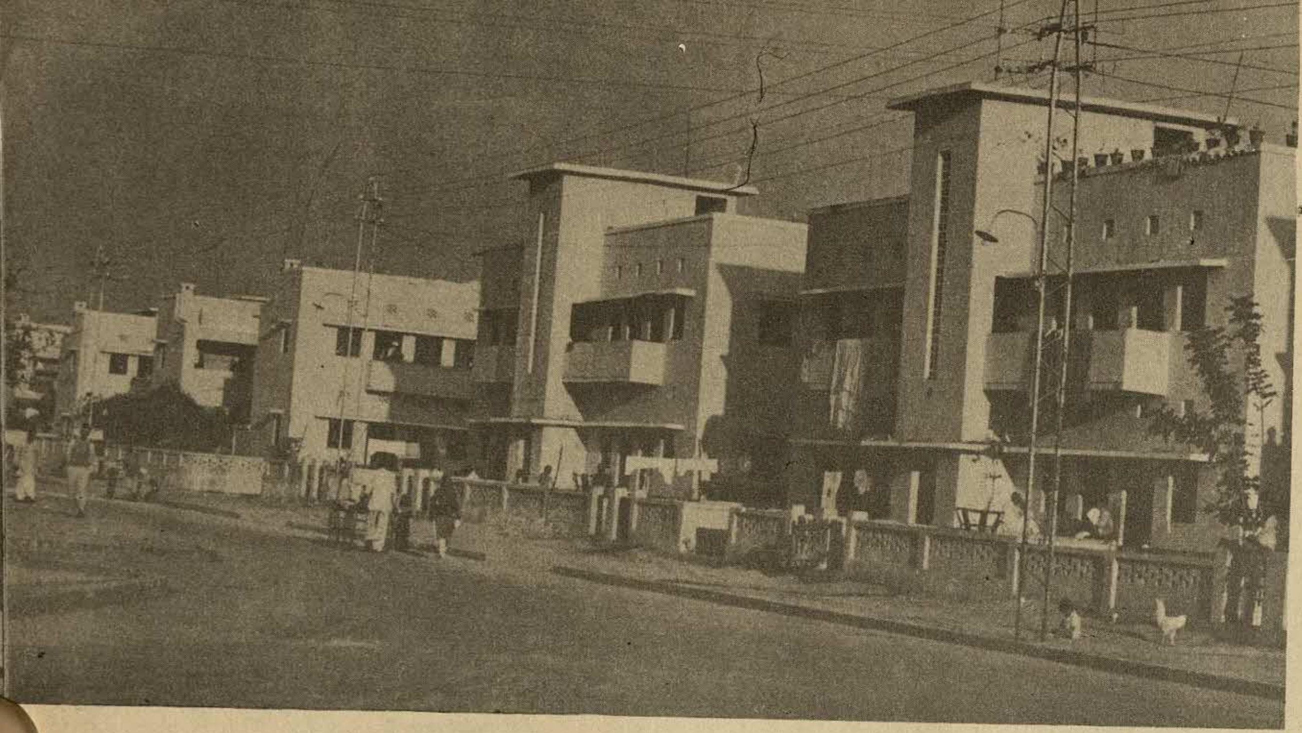
In 1957 a Village Housing Scheme was introduced for the setting up of housing projects in about 5,000 villages. This is based on the principle of aided self-help.

A National Buildings Organisation was set up in July 1954 to ensure a rational approach to the problem of housing and to cut building costs through the development of building materials, techniques, designs and practices.

The Central and State Governments, local bodies, cooperatives, private employers and individuals are all engaged in building houses for the millions. Many towns and cities have changed beyond recognition with the coming up of new houses. In villages too, there is much bustle and activity. All this is bound to gain momentum in the years to come.

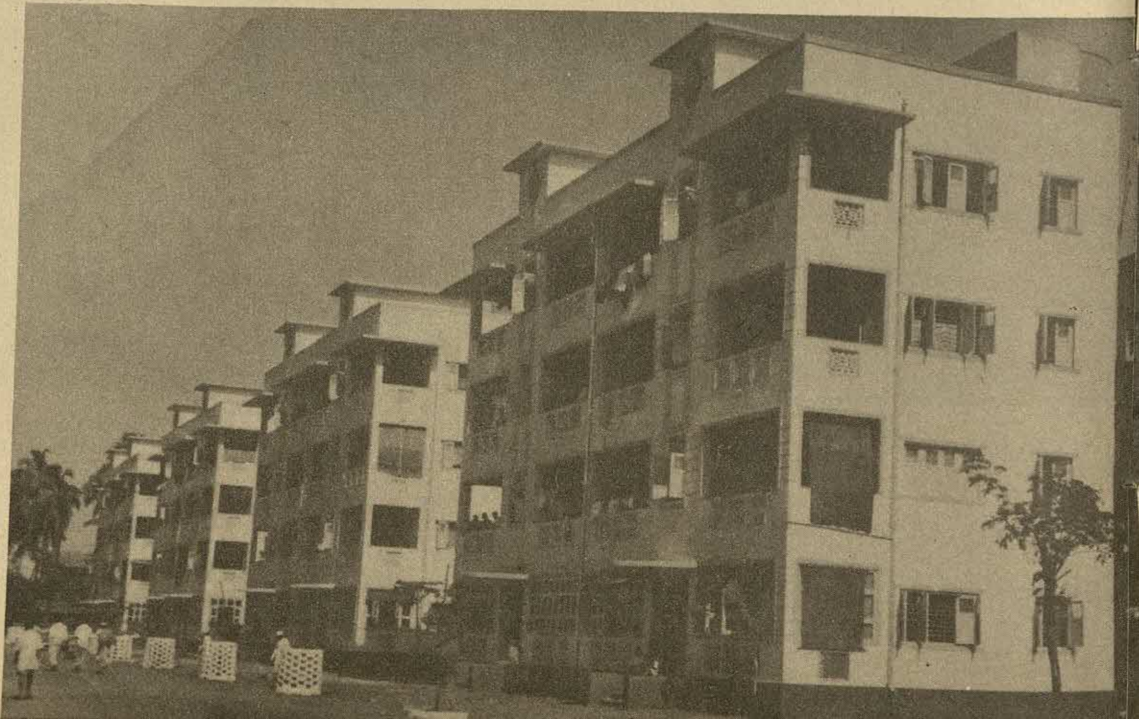


India's newest city, Chandigarh, has been planned along the most modern lines.

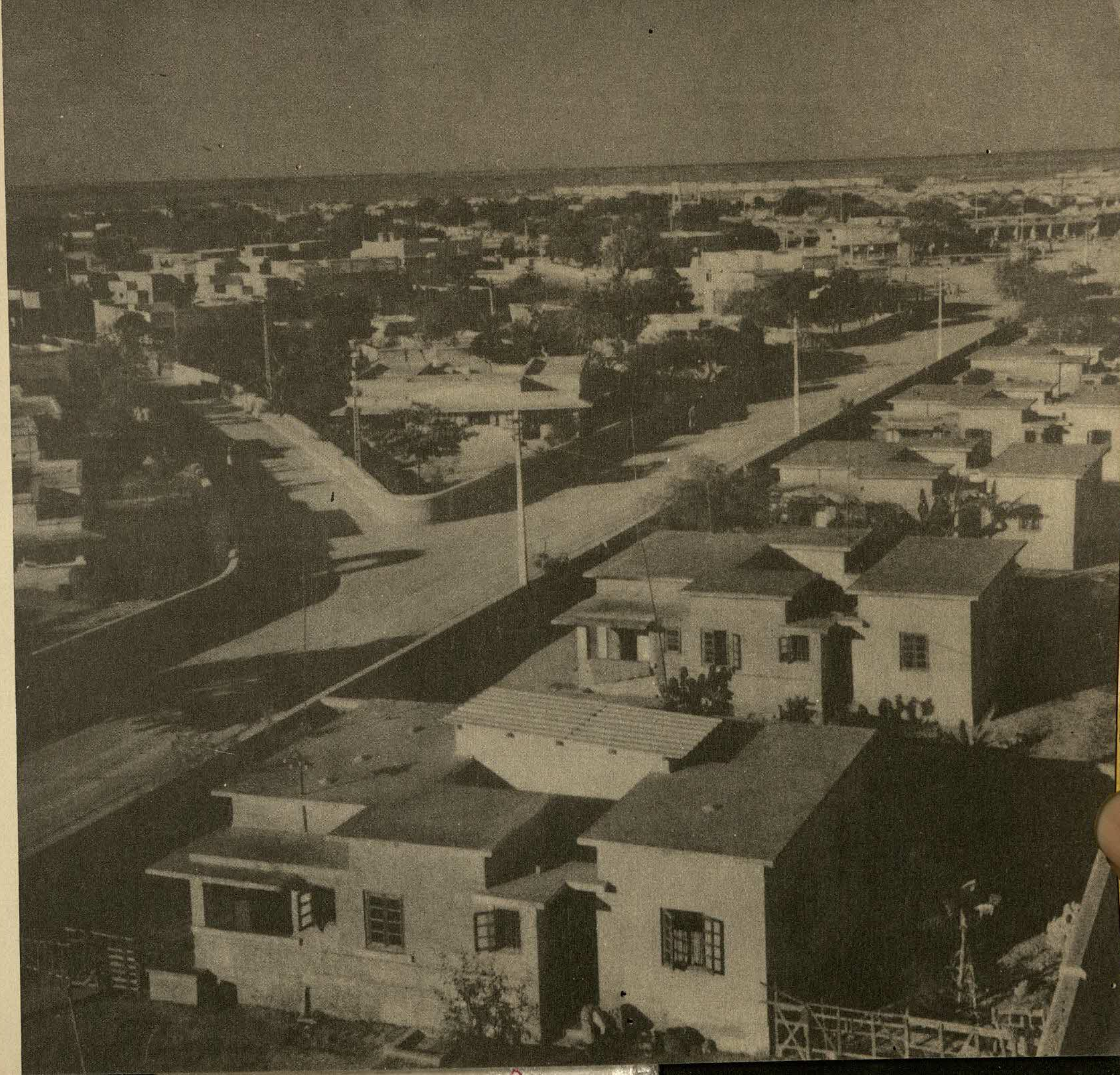


Industrial housing colony, Kanpur

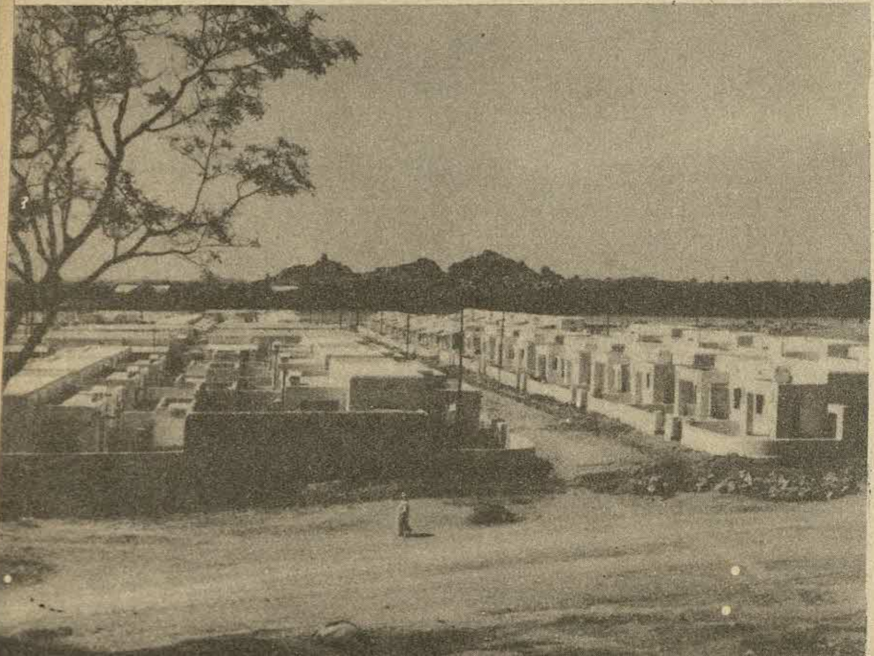
Industrial Housing at Worli, Bombay



People who left their hearths and homes in Pakistan have been settled in many colonies. This is the township for Sindhi refugees at Gandhidham.



Housing schemes in Ahmedabad, Hyderabad and Paradeep



New and better townships have sprung up along with the growth in industrialisation. Rourkela, Bhilai, Durgapur, Neyveli, Chittaranjan and many more projects have provided the most up-to-date residential colonies, complete with marketing, school, hospital and other facilities.

Strength to the tribal people

IN 1961 it was estimated that some 30 million people in India belonged to tribal communities. In several parts of the country, they live in varying degrees of concentration. Very often they live in scattered groups of villages spread over a wide area. Most of these villages are to be found in the hills of north-east India and in the forests of central India.

Geographical factors had largely preserved their distinctive ways of living and kept them away from the main currents of social and economic development. But these communities, living on the verge of a swiftly advancing civilisation, faced a real threat of being swamped by its ruthless logic. Uninitiated in the sophistications of modern social and economic development, they were exposed to the possibilities of exploitation.

The tribal people are heir to a vital tradition in song and dance. Their special talent and their arts need to be protected from too rapid a change. They need evolution rather than transformation, and they have to evolve in accordance with their genius and temperament. That is why both the quality and pace of change in tribal areas have to be specially determined.

The Government policy since Independence has been to give every opportunity to the tribal communities to develop according to their own genius. These communities live under moral and social systems which are highly developed and which have stood the test of time. They are, as a rule, an unsophisticated people, lively, frank and full of inventiveness. There exists in many tribes a remarkably high degree of craftsmanship. This finds expression in the beautiful houses they build, in the colourful garments they weave and in the exquisite objects of daily use they carve out of bamboo and wood.

The twin problem before the national leadership after Independence was to prevent exploitation and, at the same time, develop in the tribal people sufficient strength to resist it. To that extent a measure of modern development in education, agriculture, industry, power and transport was inevitable. But this development was planned in such a way as to bring new strength without effacing the local genius and tradition and custom. These are protected by many constitutional safeguards also.

An educational system (supported by scholarships, stipends, boarding and book grants and other inducements) which, while meeting the requirements of economic and social development, responds to the cultural needs of the people, is being evolved. Education and development proceed together. Tribal arts and crafts and institutions are fostered and developed. Over 400 tribal, development blocks have been taken up in areas with a substantial tribal population. The cooperative method is being increasingly applied in the projects for the tribal people.

Nagas are known for the beautiful shawls they weave.

In tribal areas, special attention is paid to sanitation and drinking water. This is a village in Araku Valley.

Civil Hospital, Along (NEFA)

Toda women of the Nilgiris

Vitality to village crafts

INDIA'S village crafts, known for their excellence through the ages and among the nations of the world, suffered greatly during the colonial era. These crafts, which had played a big role in sustaining a self-reliant rural economy, could not stand competition from the products of European industry and had to wait till Independence to recover their ancient glory.

While Indian development accepted the compulsions of large-scale industrialisation, it recognised that the traditional crafts had much beauty and value and should be preserved, encouraged and given a pride of place in the new scheme of things.

There was another consideration too. Though big industry would have a growing role in India's economy, it was an inadequate answer to the problem of employment of India's large working population, mostly living in the villages.

Thus a deliberate policy of encouraging village industries and starting new small-scale ventures was adopted. This has greatly contributed not only to the national economy but to the opening of opportunities for millions of people.

India remains even now a country of small-scale production. Over twenty million people are employed in cottage industries. The handloom industry alone employs five million people, that is, almost as many as are employed in all other organised industries including mining and plantations.

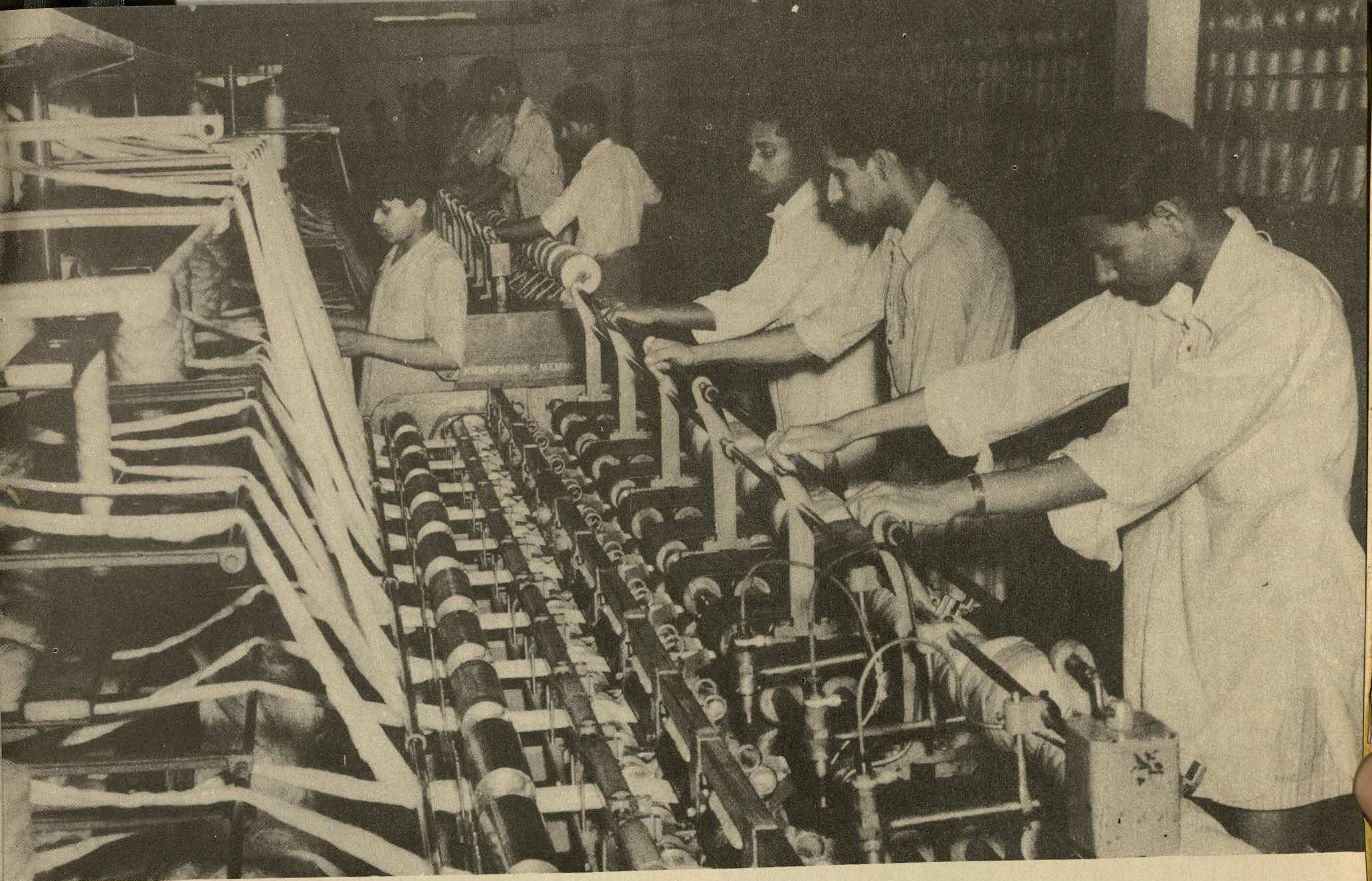
Through several organisations such as the Handicrafts and Handloom Boards, the Khadi and Village Industries Commission, the Small Scale Industries Board, the Coir and Silk Boards and the National Small Industries Corporation, the Central Government supplements the efforts of the States to foster traditional and new industries in the small scale sector. A credit guarantee scheme encourages the flow of finance to this sector.

Industrial estates, which have been set up in many parts of the country, are a step in suburban and rural industrialisation. The Government also encourages cooperative development of small industries.

Between 1960 and 1965, production of cloth by handlooms and powerlooms went up from 2,013 million metres to 3,056 million metres; of khadi from 59 million to 90 million metres, and of raw silk from 1.5 million kilograms to 2.15 million kilograms. Besides taking up new items, several established small industries registered production increases ranging from 25 to 50 per cent. Several of them have also stepped up their exports.

The membership of industrial cooperatives went up from eight hundred thousand in 1951 to three million in 1963-64.

The scope for small industries grows from year to year.

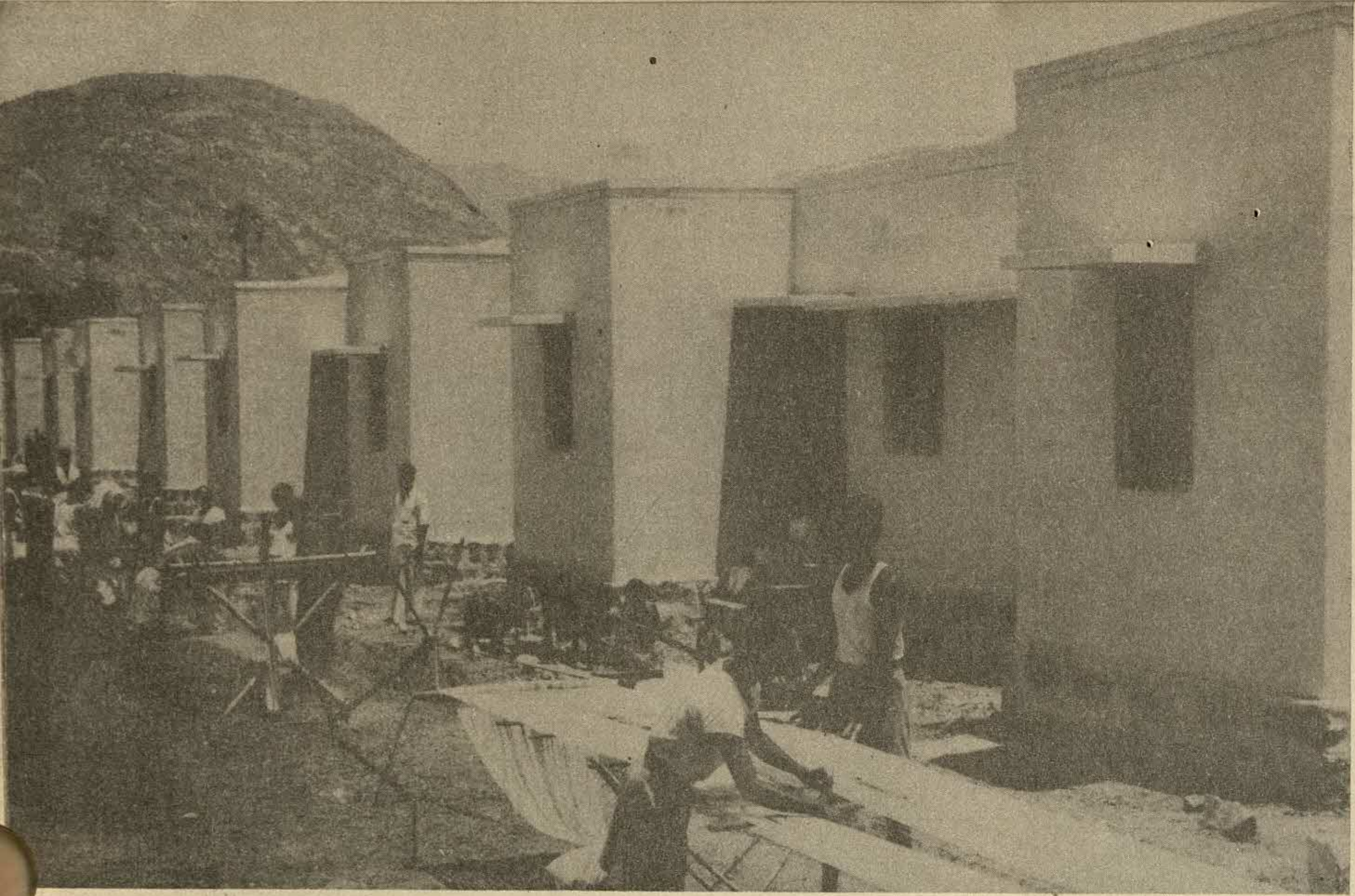


Ludhiana has earned distinction by the hard work of its people. In agriculture and small industry, the people of Ludhiana are setting up new records of achievement.

The coir industry has received a big fillip under the five year plans. The Coir Board popularises Indian coir products at home and abroad. New lines of production are being developed. Research institutes have been set up in Kerala and West Bengal. Carpet-weaving is another cottage industry which contributes to our foreign exchange earnings.

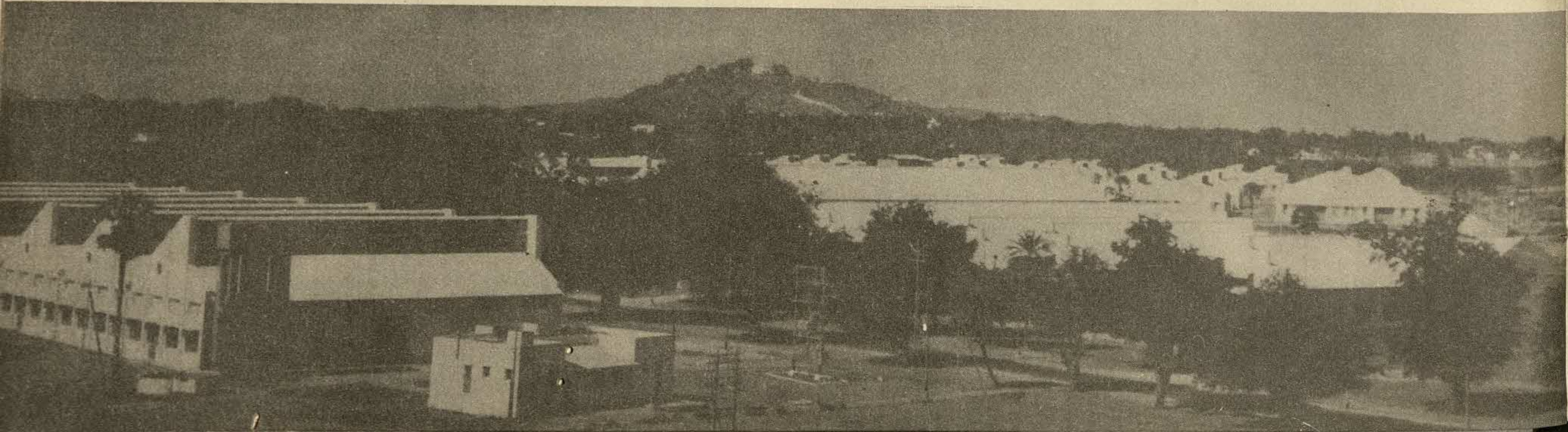
STATE INSTITUTE OF EDUCATION
MANIPUR

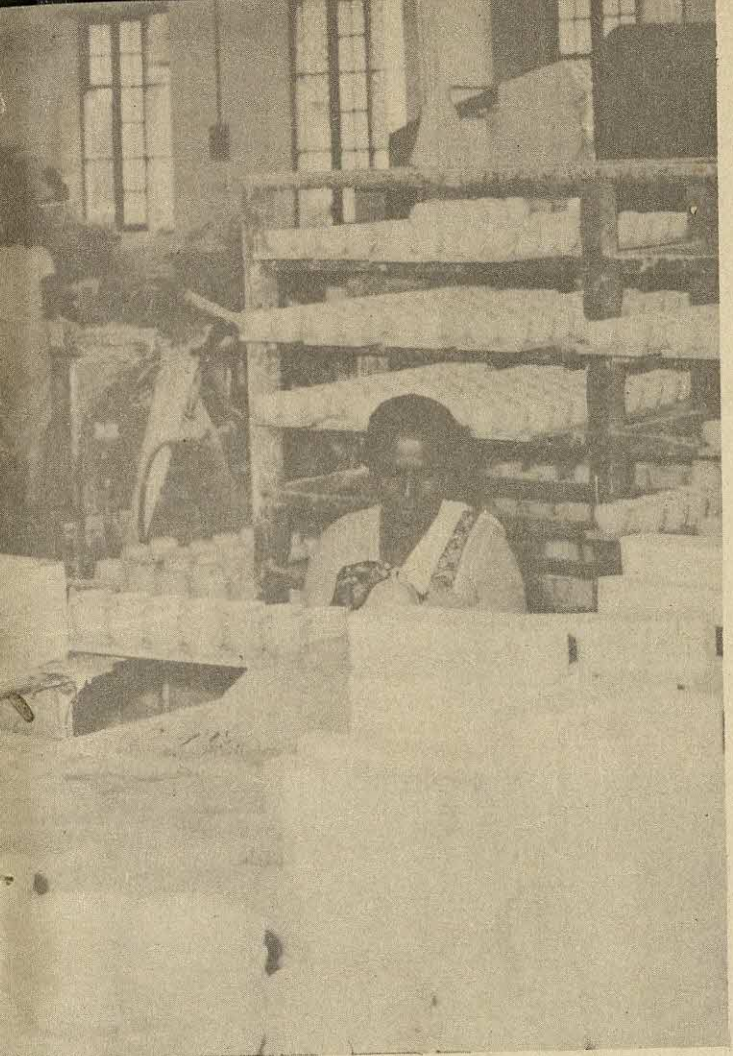
Strides have been made in the revival of India's traditional industries. Earnings from the export of handlooms, handicraft and other products of our village industries are going up. New designs are being evolved.



The first batch of houses (in Salem district) built under a scheme in Madras to provide houses for weavers

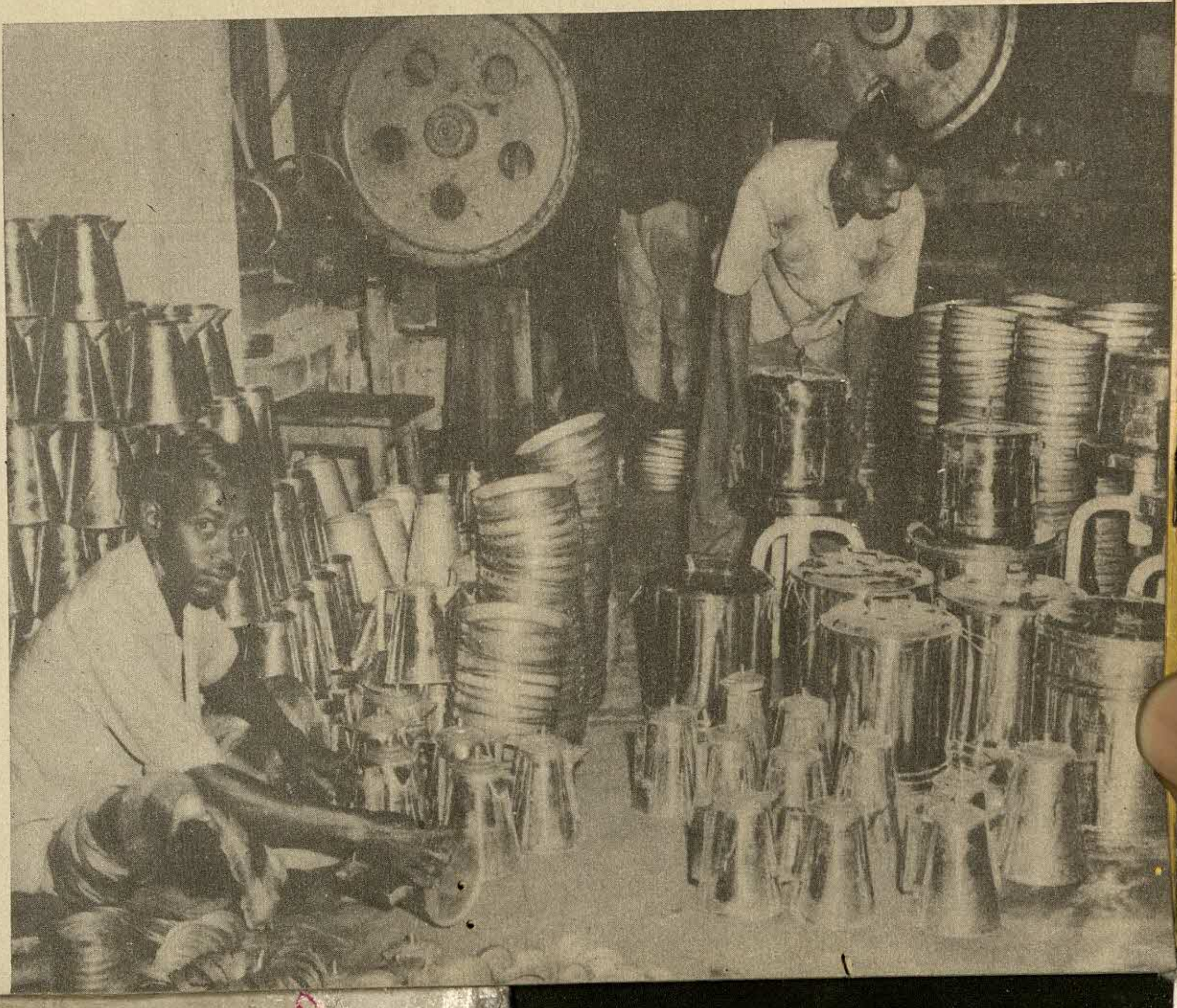
Industrial Estate, Guindy (Madras)





Ceramic industry, Kundara (Kerala)

Stainless steel utensils made at the Industrial Estate, Jharsuguda (Orissa)



Industrial Estate, Okhla, D

Lamps being made at the
Industrial Estate, Patna

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